CHAPTER 24

Budgetary Control and Responsibility Accounting

ASSIGNMENT CLASSIFICATION TABLE

Study Objectives	Questions	Brief Exercises	Exercises	A Problems	B Problems
1. Describe the concept of budgetary control.	1, 2		1		
2. Evaluate the usefulness of static budget reports.	3, 4, 5	1, 2	1, 2, 8	3A	3B
3. Explain the development of flexible budgets and the usefulness of flexible budget reports.	6, 7, 8, 9, 10, 11, 12	3, 4, 5	1, 3, 4, 5, 6, 7, 8, 9, 10	1A, 2A, 3A	1B, 2B, 3B
4. Describe the concept of responsibility accounting.	13, 14, 15, 16, 17, 18, 24		11	6A	
5. Indicate the features of responsibility reports for cost centers.	19	6	7, 9, 12		
6. Identify the content of responsibility reports for profit centers.	20, 21	7	13, 14	4A	4B
7. Explain the basis and formula used in evaluating performance in investment centers.	22, 23, 24	8, 9, 10	14, 15, 16, 17	5A	5B

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare flexible budget and budget report for manufacturing overhead.	Simple	20–30
2A	Prepare flexible budget, budget report, and graph for manufacturing overhead.	Moderate	30–40
3A	State total budgeted cost formula, and prepare flexible budget reports for two time periods.	Simple	20–30
4A	Prepare responsibility report for a profit center.	Moderate	20–30
5A	Prepare responsibility report for an investment center, and compute ROI.	Moderate	40–50
6A	Prepare reports for cost centers under responsibility accounting, and comment on performance of managers.	Moderate	40–50
1B	Prepare flexible budget and budget report for manufacturing overhead.	Simple	20–30
2B	Prepare flexible budget, budget report, and graph for manufacturing overhead.	Moderate	30–40
3B	State total budgeted cost formula, and prepare flexible budget reports for two time periods.	Simple	20–30
4B	Prepare responsibility report for a profit center.	Moderate	20–30
5B	Prepare responsibility report for an investment center, and compute ROI.	Moderate	40–50

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Describe the concept of budgetary control.	E24-1	Q24-1 Q24-2				
2. Evaluate the usefulness of static budget reports.	E24-1	Q24-3 Q24-5 Q24-4	BE24-1 E24-2 BE24-2	P24-3A P24-3B		E24-8
3. Explain the development of flexible budgets and the usefulness of flexible budget reports.	Q24-9 Q24-12 E24-1	Q24-6 Q24-7 Q24-8 Q24-10	Q24-11 E24-7 BE24-4 E24-9 E24-3 E24-10 E24-5	BE24-5 P24-3A E24-4 P24-1B E24-6 P24-3B P24-1A		BE24-3 E24-8 P24-2A P24-2B
4. Describe the concept of responsibility accounting.		Q24-13 Q24-17 Q24-14 Q24-18 Q24-15 Q24-24 Q24-16	E24-11	P24-6A		
5. Indicate the features of responsibility reports for cost centers.	Q24-19		BE24-6 E24-7 E24-9	E24-12		
6. Identify the content of responsibility reports for profit centers.		Q24-20 Q24-21	BE24-7 E24-14	E24-13 P24-4A P24-4B		
7. Explain the basis and formula used in evaluating performance in investment centers.		Q24-22 Q24-23 Q24-24	BE24-8 E24-15 BE24-9 E24-16 BE24-10 E24-17 E24-14	E24-17		P24-5A P24-5B
Broadening Your Perspective			Exploring the Web	Real-World Focus Ethics Case Communication Manag. Analysis Decision Making Across the Organization	Communication Manag. Analysis Decision Making Across the Organization	All About You Decision Making Across the Organization Ethics Case Manag. Analysis Real-World Focus

ANSWERS TO QUESTIONS

1. (a) Budgetary control is the use of budgets in controlling operations.
(b) The steps in budgetary control are:
(1) Develop the planned objectives (budget).
(2) Analyze differences between actual and budgeted results.
(3) Take corrective action.
(4) Modify future plans, if necessary.

2.

Purpose	Name of Report	Frequency	Primary Recipient(s)
(a)	Scrap	Daily	Production manager
(b)	Departmental overhead costs	Monthly	Department manager
(c)	Income statement	Monthly and Quarterly	Top management

3. The budget report for the second quarter can include year-to-date information as well as data for the second quarter.

4. There is no justification for Joe's concern. The sales budget is derived from the sales forecast and it represents management's best estimate of sales. Thus, it is a useful basis for evaluating sales performance.

5. A static budget is an appropriate basis for evaluating a manager's effectiveness in controlling costs when:
(1) The actual level of activity closely approximates the master budget activity level and/or
(2) The behavior of the costs in response to changes in activity is fixed.

6. Yes, this is true. A flexible budget is a series of static budgets at different levels of activity.

7. The performance is unfavorable. The budgeted indirect labor cost in the static budget is $1.35 per direct labor hour ($54,000 ÷ 40,000). At 45,000 direct labor hours, budgeted costs are $60,750 (45,000 X $1.35). Thus, indirect labor is $4,250 over budget ($65,000 – $60,750).

8. The performance is favorable. Factory insurance is a fixed cost. At 50,000 direct labor hours, the budgeted cost is still $6,500. Thus, factory insurance is $300 under budget ($6,500 – $6,200).

9. The steps in preparing a flexible budget are:
(1) Identify the activity index and the relevant range of activity.
(2) Identify the variable costs and determine the budgeted variable cost per unit of activity for each cost.
(3) Identify the fixed costs and determine the budgeted amount for each cost.
(4) Prepare the budget for selected increments of activity within the relevant range.

10. Alou Company can say that total budgeted costs are $25,000 fixed plus $6 per direct labor hour [($85,000 – $25,000) ÷ 10,000].

11. (a) At 9,000 hours, total budgeted costs are $76,000, or [$40,000 + ($4 X 9,000)].
(b) At 12,345 hours, total budgeted costs are $89,380, or [$40,000 + ($4 X 12,345)].

12. Management by exception means that top management's review of a budget report is focused either entirely or primarily on differences between actual results and planned objectives. The criteria for identifying exceptions are materiality and controllability of the item.

13. Responsibility accounting is a method of controlling operations that involves accumulating and reporting costs (and revenues, where relevant) on the basis of the manager who has the authority to make the day-to-day decisions about the items. The purpose of responsibility accounting is to evaluate a manager's performance on the basis of matters directly under that manager's control.

14. Ann should know that the following conditions contribute to the effective use of responsibility accounting:
(1) Costs and revenues can be directly associated with the specific level of management responsibility.
(2) The costs and revenues are controllable at the level of responsibility with which they are associated.
(3) Budget data can be developed for evaluating the manager's effectiveness in controlling the costs and revenues.

15. A cost is controllable at a given level of managerial responsibility if the manager has the power to incur the cost within a given period of time. Most costs incurred directly are controllable, whereas costs incurred indirectly and allocated to a responsibility level are noncontrollable at that level.

16. Responsibility reports differ from budget reports in two respects: (1) a distinction is made between controllable and noncontrollable items and (2) performance reports either emphasize, or only include, items controllable by the individual manager.

17. Usually there is a relationship between a responsibility reporting system and a company's organization chart. In a responsibility reporting system, reports are prepared for each level of responsibility in the organization chart.

18. There are three types of responsibility centers:
(a) A cost center incurs costs (and expenses) but does not generate revenues.
(b) A profit center incurs costs (and expenses) and also generates revenues.
(c) An investment center incurs costs (and expenses), generates revenues, and controls the investment funds available for use.

19. (a) Only controllable costs are included in a performance report for a cost center.
(b) Variable and fixed costs are not identified in the report.

20. Direct fixed costs relate specifically to one center and are incurred for the sole benefit of that center. An indirect fixed cost relates to the company's overall activities and is incurred for the benefit of more than one profit center. Both types of fixed costs are controllable. A direct fixed cost is controllable by a specific center manager and an indirect fixed cost is controllable by an officer higher up in the organization.

21. Controllable margin is contribution margin less controllable fixed costs in a profit center. The purpose of controllable margin is to provide a basis for evaluating the manager's effectiveness in controlling revenues and costs.

22. The primary basis for evaluating the performance of the manager of an investment center is return on investment (ROI). The formula is: Controllable Margin divided by Average Operating Assets.

23. ROI can be improved by: (1) increasing controllable margin and (2) reducing average operating assets. Controllable margin can be increased by increasing sales or by reducing variable and controllable fixed costs.

24. (a) The manager being evaluated should have direct input into the process of establishing budget goals and have the opportunity to respond to the evaluation. (b) Top management should make the evaluation entirely on matters controllable by the manager, and should fully support the evaluation process.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 24-1

VOORHEES COMPANY
Sales Budget Report
For the Quarter Ended March 31, 2008

Product Line	Budget	Actual	Difference
Garden-Tools	$310,000	$304,000	$6,000 U

BRIEF EXERCISE 24-2

VOORHEES COMPANY
Sales Budget Report
For the Quarter Ended June 30, 2008

	Second Quarter			Year to Date		
Product Line	Budget	Actual	Difference	Budget	Actual	Difference
Garden-Tools	$380,000	$383,000	$3,000 F	$690,000	$687,000	$3,000 U

BRIEF EXERCISE 24-3

(a)

MUSSATTO COMPANY
Static Direct Labor Budget Report
For the Month Ended January 31, 2008

	Budget		Actual	Difference
Direct Labor	$200,000	(10,000 X $20)	$203,000	$3,000 U

(b)

MUSSATTO COMPANY
Flexible Direct Labor Budget Report
For the Month Ended January 31, 2008

	Budget		Actual	Difference
Direct Labor	$208,000	(10,400 X $20)	$203,000	$5,000 F

BRIEF EXERCISE 24-3 (Continued)

The static budget does not provide a proper basis for evaluating performance because the budget is not based on the hours actually worked. In contrast, the flexible budget provides the proper basis for evaluating performance because the budget is based on the hours actually worked.

BRIEF EXERCISE 24-4

HANNON COMPANY
Monthly Flexible Manufacturing Budget
For the Year 2008

Activity level			
Finished units	**80,000**	**100,000**	**120,000**
Variable costs			
Direct materials ($4)	**$ 320,000**	**$ 400,000**	**$ 480,000**
Direct labor ($6)	**480,000**	**600,000**	**720,000**
Overhead ($8)	**640,000**	**800,000**	**960,000**
Total variable costs ($18)	**$1,440,000**	**$1,800,000**	**$2,160,000**
Fixed costs			
Depreciation (1)	**200,000**	**200,000**	**200,000**
Supervision (2)	**100,000**	**100,000**	**100,000**
Total fixed costs	**300,000**	**300,000**	**300,000**
Total costs	**$1,740,000**	**$2,100,000**	**$2,460,000**

(1) $2 X 1,200,000 ÷ 12
(2) $1 X 1,200,000 ÷ 12

BRIEF EXERCISE 24-5

HANNON COMPANY
Manufacturing Budget Report
For the Month Ended March 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Units produced	100,000	100,000	
Variable costs			
Direct materials	$ 400,000	$ 425,000	$25,000 U
Direct labor	600,000	590,000	10,000 F
Overhead	800,000	805,000	5,000 U
Total variable costs	$1,800,000	$1,820,000	$20,000 U
Fixed costs			
Depreciation	200,000	200,000	- 0 -
Supervision	100,000	100,000	- 0 -
Total fixed costs	300,000	300,000	- 0 -
Total costs	$2,100,000	$2,120,000	$20,000 U

Costs were not entirely controlled as evidence by the difference between budgeted and actual for the variable costs.

BRIEF EXERCISE 24-6

COBB COMPANY
Assembly Department
Manufacturing Overhead Cost Responsibility Report
For the Month Ended April 30, 2008

Controllable Cost	Budget	Actual	Difference Favorable F Unfavorable U
Indirect materials	$15,000	$14,300	$700 F
Indirect labor	20,000	20,600	600 U
Utilities	10,000	10,750	750 U
Supervision	5,000	5,000	0
	$50,000	$50,650	$650 U

BRIEF EXERCISE 24-7

ECKERT MANUFACTURING COMPANY
Water Division
Responsibility Report
For the Year Ended December 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Sales	$2,000,000	$2,080,000	$80,000 F
Variable costs	1,000,000	1,050,000	50,000 U
Contribution margin	1,000,000	1,030,000	30,000 F
Controllable fixed costs	300,000	310,000	10,000 U
Controllable margin	$ 700,000	$ 720,000	$20,000 F

BRIEF EXERCISE 24-8

KASPAR COMPANY
Plastics Division
Responsibility Report
For the Year Ended December 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Contribution margin	$700,000	$715,000	$15,000 F
Controllable fixed costs	300,000	309,000	9,000 U
Controllable margin	$400,000	$406,000	$ 6,000 F
Return on investment	20% ($400,000 ÷ $2,000,000)	20.3% ($406,000 ÷ $2,000,000)	.3% F ($6,000 ÷ $2,000,000)

BRIEF EXERCISE 24-9

I 24% ($1,200,000 ÷ $5,000,000)
II 25% ($2,000,000 ÷ $8,000,000)
III 32% ($3,200,000 ÷ $10,000,000)

BRIEF EXERCISE 24-10

I **A $300,000 ($2,000,000 X .15) increase in sales will increase contribution margin and controllable margin $225,000 ($300,000 X 75%). The new ROI is 28.5% ($1,425,000 ÷ $5,000,000).**

II **A decrease in costs results in a corresponding increase in controllable margin. The new ROI is 27.5% ($2,200,000 ÷ $8,000,000).**

III **A decrease in average operating assets reduces the denominator. The new ROI is 33.3% ($3,200,000 ÷ $9,600,000).**

SOLUTIONS TO EXERCISES

EXERCISE 24-1

1. True.
2. False. Budget reports are prepared *as frequently as needed*.
3. True.
4. True.
5. False. Budgetary control works best when a company has *a formalized* reporting system.
6. False. The primary recipients of the sales report are the sales manager and top management.
7. True.
8. True.
9. False. Top management's reaction to unfavorable differences is *often* influenced by the materiality of the difference.
10. True.

EXERCISE 24-2

(a)

PARGO COMPANY
Selling Expense Report
For March

	By Month			Year-to-Date		
Month	Budget	Actual	Difference	Budget	Actual	Difference
January	$30,000	$31,000	$1,000 U	$ 30,000	$ 31,000	$1,000 U
February	$35,000	$34,500	$ 500 F	$ 65,000	$ 65,500	$ 500 U
March	$40,000	$47,000	$7,000 U	$105,000	$112,500	$7,500 U

(b) The purpose of the Selling Expense Report is to help management control selling expenses. The primary recipient is the sales manager.

(c) Most likely, when management scrutinized the results for January and February, they would determine that the difference was insignificant (3.3% in January and 1.4% in February), and require no action. When the March results are examined, however, the fact that the difference is 17.5% of budget would probably cause management to investigate further. As a result of their investigation, management would either take corrective action or modify the amounts of budgeted selling expense for future months to reflect changing conditions.

EXERCISE 24-3

RANEY COMPANY
Monthly Flexible Manufacturing Overhead Budget
For the Year 2008

Activity level				
Direct labor hours	7,000	8,000	9,000	10,000
Variable costs				
Indirect labor ($1)	$ 7,000	$ 8,000	$ 9,000	$10,000
Indirect materials ($.50)	3,500	4,000	4,500	5,000
Utilities ($.40)	2,800	3,200	3,600	4,000
Total variable costs ($1.90)	13,300	15,200	17,100	19,000
Fixed costs				
Supervision	4,000	4,000	4,000	4,000
Depreciation	1,500	1,500	1,500	1,500
Property taxes	800	800	800	800
Total fixed costs	6,300	6,300	6,300	6,300
Total costs	$19,600	$21,500	$23,400	$25,300

EXERCISE 24-4

(a)

RANEY COMPANY
Manufacturing Overhead Budget Report (Flexible)
For the Month Ended July 31, 2008

			Difference
Direct labor hours (DLH)	Budget at 9,000 DLH	Actual Costs 9,000 DLH	Favorable F Unfavorable U
Variable costs			
Indirect labor	$ 9,000	$ 8,700	$300 F
Indirect materials	4,500	4,300	200 F
Utilities	3,600	3,200	400 F
Total variable costs	17,100	16,200	900 F
Fixed costs			
Supervision	4,000	4,000	—
Depreciation	1,500	1,500	—
Property taxes	800	800	—
Total fixed costs	6,300	6,300	—
Total costs	$23,400	$22,500	$900 F

EXERCISE 24-4 (Continued)

(b)

RANEY COMPANY
Manufacturing Overhead Budget Report (Flexible)
For the Month Ended July 31, 2008

Direct labor hours (DLH)	Budget at 8,500 DLH	Actual Costs 8,500 DLH	Difference Favorable F Unfavorable U
Variable costs			
Indirect labor	$ 8,500	$ 8,700	$200 U
Indirect materials	4,250	4,300	50 U
Utilities	3,400	3,200	200 F
Total variable costs	16,150	16,200	50 U
Fixed costs			
Supervision	4,000	4,000	—
Depreciation	1,500	1,500	—
Property taxes	800	800	—
Total fixed costs	6,300	6,300	—
Total costs	$22,450	$22,500	$ 50 U

(c) In case (a) the performance for the month was satisfactory. In case (b) management may need to determine the causes of the unfavorable differences for indirect labor and indirect materials, or since the differences are small, 2.4% of budgeted cost for indirect labor and 1.2% for indirect materials, they might be considered immaterial.

EXERCISE 24-5

TRUSLER COMPANY
Monthly Flexible Selling Expense Budget
For the Year 2008

Activity level				
Sales	$170,000	$180,000	$190,000	$200,000
Variable expenses				
Sales commissions (5%)	$ 8,500	$ 9,000	$ 9,500	$ 10,000
Advertising (4%)	6,800	7,200	7,600	8,000
Traveling (3%)	5,100	5,400	5,700	6,000
Delivery (2%)	3,400	3,600	3,800	4,000
Total variable expenses (14%)	23,800	25,200	26,600	28,000
Fixed expenses				
Sales salaries	34,000	34,000	34,000	34,000
Depreciation	7,000	7,000	7,000	7,000
Insurance	1,000	1,000	1,000	1,000
Total fixed expenses	42,000	42,000	42,000	42,000
Total expenses	$ 65,800	$ 67,200	$ 68,600	$ 70,000

EXERCISE 24-6

(a)

TRUSLER COMPANY
Selling Expense Budget Report (Flexible)
For the Month Ended March 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Sales	$170,000	$170,000	
Variable expenses			
Sales commissions	$ 8,500	$ 9,200	$ 700 U
Advertising	6,800	7,000	200 U
Travel	5,100	5,100	0
Delivery	3,400	3,500	100 U
Total variable expenses	23,800	24,800	1,000 U
Fixed expenses			
Sales salaries	34,000	34,000	0
Depreciation	7,000	7,000	0
Insurance	1,000	1,000	0
Total fixed expenses	42,000	42,000	0
Total expenses	$ 65,800	$ 66,800	$1,000 U

EXERCISE 24-6 (Continued)

(b)

TRUSLER COMPANY
Selling Expense Budget Report (Flexible)
For the Month Ended March 31, 2008

	Budget	Actual	Difference Favorable F / Unfavorable U
Sales	$180,000	$180,000	
Variable expenses			
Sales commissions	$ 9,000	$ 9,200	$200 U
Advertising	7,200	7,000	200 F
Travel	5,400	5,100	300 F
Delivery	3,600	3,500	100 F
Total variable expenses	25,200	24,800	400 F
Fixed costs			
Sales salaries	34,000	34,000	0
Depreciation	7,000	7,000	0
Insurance	1,000	1,000	0
Total fixed expenses	42,000	42,000	0
Total expenses	$ 67,200	$ 66,800	$400 F

(c) Flexible budgets are essential in evaluating a manager's performance in controlling variable expenses because the budget allowance varies directly with changes in the activity index. At $170,000 of sales, the manager was over budget (unfavorable) by $1,000 but at $180,000 of sales, the manager was under budget (favorable) by $400.

EXERCISE 24-7

(a)

PLETCHER COMPANY
Manufacturing Overhead Budget Report (Flexible)
For the Quarter Ended March 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Variable costs			
Indirect materials	$12,000	$13,800	$1,800 U
Indirect labor	10,000	9,600	400 F
Utilities	8,000	8,700	700 U
Maintenance	6,000	4,900	1,100 F
Total variable costs	36,000	37,000	1,000 U
Fixed costs			
Supervisory salaries	36,000	36,000	0
Depreciation	7,000	7,000	0
Property taxes and insurance	8,000	8,200	200 U
Maintenance	5,000	5,000	0
Total fixed costs	56,000	56,200	200 U
Total costs	$92,000	$93,200	$1,200 U

(b)

PLETCHER COMPANY
Manufacturing Overhead Responsibility Report
For the Quarter Ended March 31, 2008

Controllable Costs	Budget	Actual	Difference Favorable F Unfavorable U
Indirect materials	$12,000	$13,800	$1,800 U
Indirect labor	10,000	9,600	400 F
Utilities	8,000	8,700	700 U
Maintenance*	11,000	9,900	1,100 F
Supervisory salaries	36,000	36,000	0
	$77,000	$78,000	$1,000 U

*Includes variable and fixed costs

EXERCISE 24-8

(a)

GARBER COMPANY
Selling Expense Budget Report (Flexible)
Clothing Department
For the Month Ended October 31, 2008

	Budget	Actual	Difference Favorable F / Unfavorable U
Sales in units	10,000	10,000	
Variable expenses			
Sales commissions ($.25)	$ 2,500	$ 2,600	$ 100 U
Advertising expense ($.10)	1,000	850	150 F
Travel expense ($.45)	4,500	4,000	500 F
Free samples ($.20)	2,000	1,300	700 F
Total variable expenses ($1.00)	10,000	8,750	1,250 F
Fixed expenses			
Rent	1,500	1,500	0
Sales salaries	1,200	1,200	0
Office salaries	800	800	0
Depreciation—salesmen autos	500	500	0
Total fixed expenses	4,000	4,000	0
Total expenses	$14,000	$12,750	$1,250 F

(b) Terry should not have been reprimanded. As shown in the flexible budget report, variable costs were $1,250 below budget.

EXERCISE 24-9

(a)

PRONTO PLUMBING COMPANY
Home Plumbing Services Segment
Responsibility Report
For the Quarter Ended March 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Service revenue	$25,000	$26,000	$1,000 F
Variable costs:			
Material and supplies	1,500	1,200	300 F
Wages	3,000	3,300	300 U
Gas and oil	2,700	3,400	700 U
Total variable costs	7,200	7,900	700 U
Contribution margin	17,800	18,100	300 F
Controllable fixed costs:			
Supervisory salaries	9,000	9,400	400 U
Insurance	4,000	3,500	500 F
Equipment depreciation	1,600	1,300	300 F
Total controllable fixed costs	14,600	14,200	400 F
Controllable margin	$ 3,200	$ 3,900	$ 700 F

(b)

MEMO

TO: Paul Pronto

FROM: Student

SUBJECT: The Reporting Principles of Performance Reports

When evaluating the performance of a company's segments, the performance reports should:

1. **Contain only data that are controllable by the segment's manager.**
2. **Provide accurate and reliable budget data to measure performance.**
3. **Highlight significant differences between actual results and budget goals.**
4. **Be tailor-made for the intended evaluation.**
5. **Be prepared at reasonable intervals.**

I hope these suggested guidelines will be helpful in establishing the performance reporting system to be used by Pronto Plumbing Company.

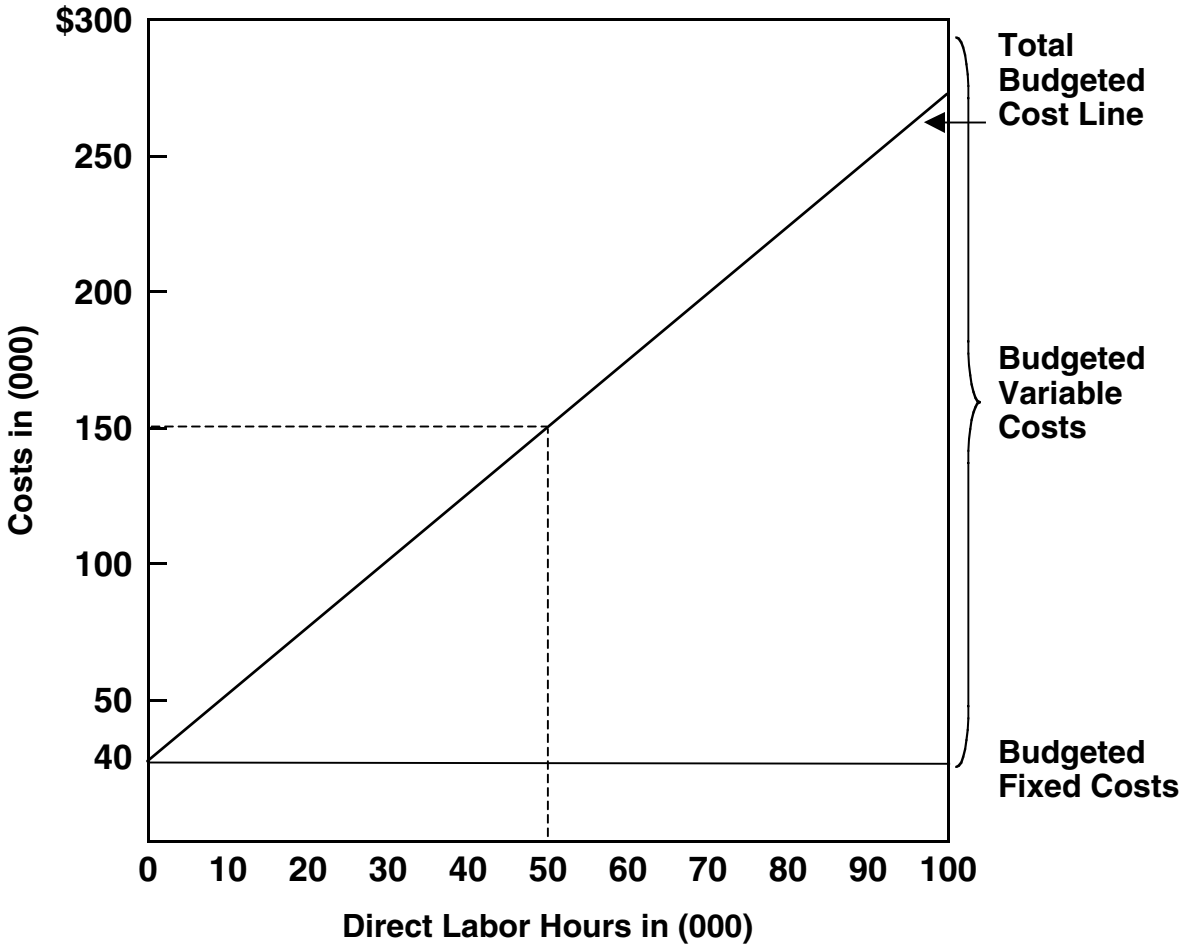
EXERCISE 24-10

(a) Fabricating Department = $40,000 fixed costs plus total variable costs of $2.20 per direct labor hour [($150,000 – $40,000) ÷ 50,000].

Assembling Department = $30,000 fixed costs plus total variable costs of $1.60 per direct labor hour [($110,000 – $30,000) ÷ 50,000].

(b) Fabricating Department = $40,000 + ($2.20 X 53,000) = $156,600.
Assembling Department = $30,000 + ($1.60 X 47,000) = $105,200.

(c)



EXERCISE 24-11

(a) To Dallas Department Manager—Finishing — **Month: July**

Controllable Costs:	Budget	Actual	Fav/Unfav
Direct Materials	$ 45,000	$ 41,500	$3,500 F
Direct Labor	82,000	83,000	1,000 U
Manufacturing Overhead	49,200	51,000	1,800 U
Total	$176,200	$175,500	$ 700 F

(b) To Assembly Plant Manager—Dallas — **Month: July**

Controllable Costs:	Budget	Actual	Fav/Unfav
Dallas Office	$ 92,000	$ 95,000	$3,000 U
Departments:			
Machining	216,000	220,000	4,000 U
Finishing	176,200	175,500	700 F
Total	$484,200	$490,500	$6,300 U

(c) To Vice President—Production — **Month: July**

Controllable Costs:	Budget	Actual	Fav/Unfav
V P Production	$ 130,000	$ 132,000	$2,000 U
Assembly plants:			
Atlanta	421,000	424,000	3,000 U
Dallas	484,200	490,500	6,300 U
Tucson	496,500	494,000	2,500 F
Total	$1,531,700	$1,540,500	$8,800 U

EXERCISE 24-12

(a)

CREDE COMPANY
Mixing Department
Responsibility Report
For the Month Ended January 31, 2008

Controllable Cost	Budget	Actual	Difference
Indirect labor	$12,000	$12,200	$ 200 U
Indirect materials	7,500	10,200	2,700 U
Lubricants	1,700	1,650	50 F
Maintenance	3,500	3,500	–0–
Utilities	5,000	6,500	1,500 U
	$29,700	$34,050	$4,350 U

(b) Most likely, when management examined the responsibility report for January, they would determine that the difference was insignificant for indirect labor (1.7% of budget), lubricants (2.9%), and maintenance (0%) and require no action. However, the differences for indirect materials (36%), and utilities (30%) would cause management to investigate further. As a result of their investigation, management would either take corrective action or modify the budgeted amounts for future months to reflect changing conditions.

EXERCISE 24-13

(a)	**(1)**	Controllable margin ($240,000 – $100,000)	$140,000
	(2)	Variable costs ($600,000 – $240,000)	360,000
	(3)	Contribution margin ($450,000 – $330,000)	120,000
	(4)	Controllable fixed costs ($120,000 – $90,000)	30,000
	(5)	Controllable fixed costs ($180,000 – $96,000)	84,000
	(6)	Sales ($250,000 + $180,000)	430,000

EXERCISE 24-13 (Continued)

(b)

GONZALES MANUFACTURING INC.
Women's Shoe Division
Responsibility Report
For the Month Ended June 30, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Sales	$600,000	$600,000	$ 0
Variable costs	350,000	360,000	10,000 U
Contribution margin	250,000	240,000	10,000 U
Controllable fixed costs	100,000	100,000	0
Controllable margin	$150,000	$140,000	$10,000 U

EXERCISE 24-14

(a)

BRANDON McCARTHY COMPANY
Sports Equipment Division
Responsibility Report
2008

	Budget	Actual	Difference
Sales	$900,000	$880,000	$20,000 U
Variable costs			
Cost of goods sold	440,000	409,000	31,000 F
Selling and administrative	60,000	61,000	1,000 U
Total	500,000	470,000	30,000 F
Contribution margin	400,000	410,000	10,000 F
Controllable fixed costs			
Cost of goods sold	100,000	105,000	5,000 U
Selling and administrative	90,000	67,000	23,000 F
Total	190,000	172,000	18,000 F
Controllable margin	$210,000	$238,000	$28,000 F

(b) $238,000/$1,000,000 = 23.8%

EXERCISE 24-15

(a) Controllable margin = ($3,000,000 – $1,950,000 – $600,000) = $450,000
ROI = $450,000 ÷ $5,000,000 = 9%

(b) 1. Contribution margin percentage is 35%, or ($1,050,000 ÷ $3,000,000)
Increase in controllable margin = $320,000 X 35% = $112,000
ROI = ($450,000 + $112,000) ÷ $5,000,000 = 11.2%

2. ($450,000 + $100,000) ÷ $5,000,000 = 11%

3. $450,000 ÷ ($5,000,000 – $200,000) = 9.4%

EXERCISE 24-16

(a)

MEDINA AND ORTIZ DENTAL CLINIC
Preventive Services
Responsibility Report
For the Month Ended May 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Service revenue	$39,000	$40,000	$1,000 F
Variable costs			
Filling materials	4,900	5,000	100 U
Novocain	3,800	4,000	200 U
Dental assistant wages	2,500	2,500	0
Supplies	2,250	2,000	250 F
Utilities	450	500	50 U
Total variable costs	13,900	14,000	100 U
Contribution margin	25,100	26,000	900 F
Controllable fixed costs			
Dentist salary	9,500	10,000	500 U
Equipment depreciation	6,000	6,000	0
Total controllable fixed costs	15,500	16,000	500 U
Controllable margin	$ 9,600	$10,000	$ 400 F
Return on investment*	12.0%	12.5%	0.5% F

*Average investment = ($82,400 + $77,600) ÷ 2 = $80,000
Budget ROI = $9,600 ÷ $80,000
Actual ROI = $10,000 ÷ $80,000
ROI Difference = $400 ÷ $80,000

EXERCISE 24-16 (Continued)

(b)

MEMO

TO: Drs. Martin Medina and Olga Ortiz

FROM: Student

SUBJECT: Deficiencies in the Current Responsibility Reporting System

The current reporting system has the following deficiencies:

1. **It does not clearly show both budgeted goals and actual performance.**
2. **It does not indicate the contribution margin generated by the center, showing the amount available to go towards covering controllable fixed costs.**
3. **It does not report only those costs controllable by the manager of the center. Instead, it includes both controllable and common fixed costs. This results in the center appearing to be unprofitable.**
4. **It does not indicate the return on investment earned by the center.**

All of these deficiencies have been addressed in the recommended responsibility report attached. As can be seen from that report, the Preventative Services center is profitable. The service revenues generated in this center are adequate to cover all of its costs, both variable and controllable fixed costs, and contribute toward the covering of the clinic's common fixed costs. In addition, the report indicates the return on investment earned by the center and that it exceeds the budget goal.

EXERCISE 24-17

Planes:

ROI = Controllable margin ÷ Average operating assets
12% = Controllable margin ÷ $25,000,000
Controllable margin = $25,000,000 X 12%
= $3,000,000

Contribution margin = Controllable margin + Controllable fixed costs
= $3,000,000 + $1,500,000
= $4,500,000

Service revenue = Contribution margin + Variable costs
= $4,500,000 + $5,500,000
= $10,000,000

Taxis:

ROI = Controllable margin ÷ Average operating assets
10% = $80,000 ÷ Average operating assets
Average operating assets = $80,000 ÷ 10%
= $800,000

Controllable margin = Contribution margin – Controllable fixed costs
$80,000 = $200,000 – Controllable fixed costs
Controllable fixed costs = $200,000 – $80,000
= $120,000

Contribution margin = Service revenue – Variable costs
$200,000 = $500,000 – Variable costs
Variable costs = $500,000 – $200,000
= $300,000

EXERCISE 24-17 (Continued)

Limos:

ROI = Controllable margin ÷ Average operating assets
= $240,000 ÷ $1,600,000
= 15%

Controllable margin	=	Contribution margin	–	Controllable fixed costs
$240,000	=	$480,000	–	Controllable fixed costs
Controllable fixed costs			=	$480,000 – $240,000
			=	$240,000

Contribution margin	=	Service revenue	– Variable costs
$480,000	=	Service revenue	– $320,000
Sales	=	$480,000 + $320,000	
	=	$800,000	

SOLUTIONS TO PROBLEMS

PROBLEM 24-1A

(a)

MALONE COMPANY
Packaging Department
Flexible Monthly Manufacturing Overhead Budget
For the Year 2008

Activity level				
Direct labor hours	**27,000**	**30,000**	**33,000**	**36,000**
Variable costs				
Indirect labor ($.35)	**$ 9,450**	**$10,500**	**$11,550**	**$12,600**
Indirect materials ($.25)	**6,750**	**7,500**	**8,250**	**9,000**
Repairs ($.15)	**4,050**	**4,500**	**4,950**	**5,400**
Utilities ($.20)	**5,400**	**6,000**	**6,600**	**7,200**
Lubricants ($.05)	**1,350**	**1,500**	**1,650**	**1,800**
Total variable costs ($1.00)	**27,000**	**30,000**	**33,000**	**36,000**
Fixed costs				
Supervision	**7,500**	**7,500**	**7,500**	**7,500**
Depreciation	**5,000**	**5,000**	**5,000**	**5,000**
Insurance	**2,500**	**2,500**	**2,500**	**2,500**
Rent	**2,000**	**2,000**	**2,000**	**2,000**
Property taxes	**1,500**	**1,500**	**1,500**	**1,500**
Total fixed costs	**18,500**	**18,500**	**18,500**	**18,500**
Total costs	**$45,500**	**$48,500**	**$51,500**	**$54,500**

PROBLEM 24-1A (Continued)

(b)

MALONE COMPANY
Packaging Department
Manufacturing Overhead Budget Report (Flexible)
For the Month Ended October 31, 2008

Direct labor hours (DLH)	Budget at 27,000 DLH	Actual Costs 27,000 DLH	Difference Favorable F Unfavorable U
Variable costs			
Indirect labor	$ 9,450	$10,360	$ 910 U
Indirect materials	6,750	6,400	350 F
Repairs	4,050	4,000	50 F
Utilities	5,400	5,700	300 U
Lubricants	1,350	1,640	290 U
Total variable costs	27,000	28,100	1,100 U
Fixed costs			
Supervision	7,500	7,500	0
Depreciation	5,000	5,000	0
Insurance	2,500	2,470	30 F
Rent	2,000	2,000	0
Property taxes	1,500	1,500	0
Total fixed costs	18,500	18,470	30 F
Total costs	$45,500	$46,570	$1,070 U

(c) The overall performance of management was slightly unfavorable. However, none of the unfavorable differences exceeded 10% of budget except for lubricants (21%).

PROBLEM 24-2A

(a)

FULTZ COMPANY
Flexible Monthly Manufacturing Overhead Budget
Ironing Department
For the Year 2008

Activity level				
Direct labor hours	**35,000**	**40,000**	**45,000**	**50,000**
Variable costs				
Indirect labor ($.40)	**$14,000**	**$16,000**	**$18,000**	**$20,000**
Indirect materials ($.50)	**17,500**	**20,000**	**22,500**	**25,000**
Factory utilities ($.30)	**10,500**	**12,000**	**13,500**	**15,000**
Factory repairs ($.20)	**7,000**	**8,000**	**9,000**	**10,000**
Total variable costs ($1.40)	**49,000**	**56,000**	**63,000**	**70,000**
Fixed costs				
Supervision	**3,500**	**3,500**	**3,500**	**3,500**
Depreciation	**1,500**	**1,500**	**1,500**	**1,500**
Insurance	**1,000**	**1,000**	**1,000**	**1,000**
Rent	**2,000**	**2,000**	**2,000**	**2,000**
Total fixed costs	**8,000**	**8,000**	**8,000**	**8,000**
Total costs	**$57,000**	**$64,000**	**$71,000**	**$78,000**

PROBLEM 24-2A (Continued)

(b)

FULTZ COMPANY
Ironing Department
Manufacturing Overhead Budget Report (Flexible)
For the Month Ended June 30, 2008

Direct labor hours (DLH)	Budget at 42,000 DLH	Actual Costs 42,000 DLH	Difference Favorable F Unfavorable U
Variable costs			
Indirect labor	$16,800 (1)	$18,060 (5)	$1,260 U
Indirect materials	21,000 (2)	20,580 (6)	420 F
Factory utilities	12,600 (3)	13,440 (7)	840 U
Factory repairs	8,400 (4)	10,080 (8)	1,680 U
Total variable costs	58,800	62,160	3,360 U
Fixed costs			
Supervision	3,500	3,500	0
Depreciation	1,500	1,500	0
Insurance	1,000	1,000	0
Rent	2,000	2,000	0
Total fixed costs	8,000	8,000	0
Total costs	$66,800	$70,160	$3,360 U

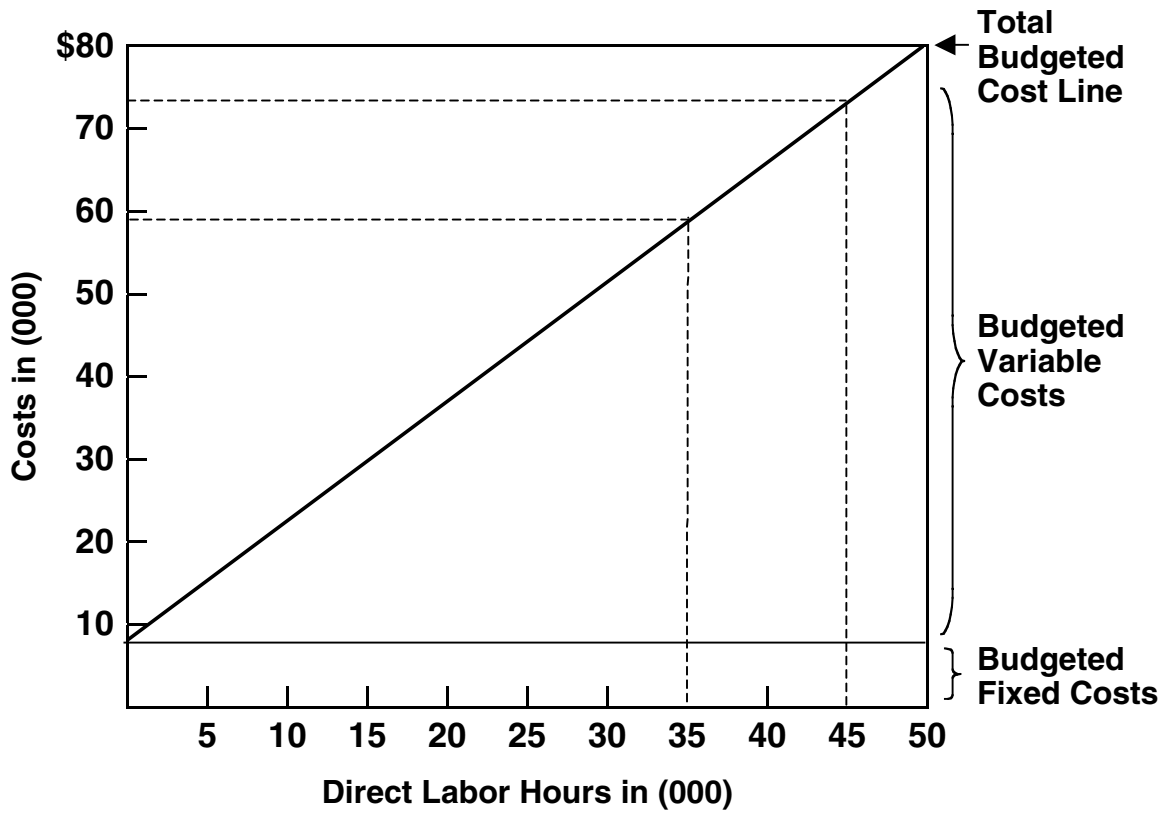
(1) 42,000 X $0.40 (2) 42,000 X $0.50 (3) 42,000 X $0.30 (4) 42,000 X $0.20
(5) 42,000 X $0.43 (6) 42,000 X $0.49 (7) 42,000 X $0.32 (8) 42,000 X $0.24

(c) The manager was ineffective in controlling variable costs ($3,360 U). Fixed costs were effectively controlled.

(d) The formula is fixed costs of $8,000 plus total variable costs of $1.40 per direct labor hour.

PROBLEM 24-2A (Continued)

(e)



PROBLEM 24-3A

(a) The formula is fixed costs $36,000 plus variable costs of $2.80 per unit ($168,000 ÷ 60,000 units).

(b)

ZELMER COMPANY
Assembling Department
Budget Report (Flexible)
For the Month Ended August 31, 2008

	Budget at	Actual Costs	Difference Favorable F
Units	58,000 Units	58,000 Units	Unfavorable U
Variable costs*			
Direct materials ($.80 X 58,000)	$ 46,400	$ 47,000	$ 600 U
Direct labor ($.90 X 58,000)	52,200	51,300	900 F
Indirect materials ($.40 X 58,000)	23,200	24,200	1,000 U
Indirect labor ($.30 X 58,000)	17,400	17,500	100 U
Utilities ($.25 X 58,000)	14,500	14,900	400 U
Maintenance ($.15 X 58,000)	8,700	9,200	500 U
Total variable ($2.80 X 58,000)	162,400	164,100	1,700 U
Fixed costs			
Rent	12,000	12,000	0
Supervision	17,000	17,000	0
Depreciation	7,000	7,000	0
Total fixed	36,000	36,000	0
Total costs	$198,400	$200,100	$1,700 U

*Note that the per unit variable costs are computed by taking the budget amount at 60,000 units and dividing it by 60,000. For example, direct materials per unit is therefore $0.80 or $\frac{\$48,000}{60,000}$.

This report provides a better basis for evaluating performance because the budget is based on the level of activity actually achieved. The manager should be criticized because every variable cost was over budget except for direct labor.

PROBLEM 24-3A (Continued)

(c)

ZELMER COMPANY
Assembling Department
Budget Report (Flexible)
For the Month Ended September 30, 2008

Units	Budget at 64,000 Units	Actual Costs 64,000 Units	Difference Favorable F Unfavorable U
Variable costs			
Direct materials (.80 X 64,000)	$ 51,200	$ 51,700	$ 500 U
Direct labor ($.90 X 64,000)	57,600	56,430	1,170 F
Indirect materials ($.40 X 64,000)	25,600	26,620	1,020 U
Indirect labor ($.30 X 64,000)	19,200	19,250	50 U
Utilities ($.25 X 64,000)	16,000	16,390	390 U
Maintenance ($.15 X 64,000)	9,600	10,120	520 U
Total variable costs	179,200	180,510	1,310 U
Fixed costs			
Rent	12,000	12,000	0
Supervision	17,000	17,000	0
Depreciation	7,000	7,000	0
Total fixed costs	36,000	36,000	0
Total costs	$215,200	$216,510	$1,310 U

The manager's performance was slightly better in September than it was in August. However, each variable cost was slightly over budget again except for direct labor.

Note that actual variable costs in September were 10% higher than the actual variable costs in August. Therefore to find the actual variable costs in September, the actual variable costs in August must be increased 10% as follows:

	August (actual)		September (actual)
Direct materials	$ 47,000 X 110%	=	$ 51,700
Direct labor	51,300 X 110%		56,430
Indirect materials	24,200 X 110%		26,620
Indirect labor	17,500 X 110%		19,250
Utilities	14,900 X 110%		16,390
Maintenance	9,200 X 110%		10,120
	$164,100		$180,510

PROBLEM 24-4A

(a)

JANTZEN MANUFACTURING INC.
Patio Furniture Division
Responsibility Report
For the Year Ended December 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Sales	$2,500,000	$2,560,000	$60,000 F
Variable costs			
Cost of goods sold	1,300,000	1,259,000	41,000 F
Selling and administrative	220,000	227,000	7,000 U
Total	1,520,000	1,486,000	34,000 F
Contribution margin	980,000	1,074,000	94,000 F
Controllable fixed costs			
Cost of goods sold	200,000	206,000	6,000 U
Selling and administrative	50,000	52,000	2,000 U
Total	250,000	258,000	8,000 U
Controllable margin	$ 730,000	$ 816,000	$86,000 F

(b) **The manager effectively controlled revenues and costs. Contribution margin was $94,000 favorable and controllable margin was $86,000 favorable. Contribution margin was favorable primarily because sales were $60,000 over budget and variable cost of goods sold was $41,000 under budget. Apparently, the manager was able to control variable cost of goods sold when sales exceeded budget expectations. The manager was ineffective in controlling fixed costs. However, the unfavorable difference of $8,000 was only 9% of the favorable difference in contribution margin.**

(c) **Two costs are excluded from the report: (1) noncontrollable fixed costs and (2) indirect fixed costs. The reason is that neither cost is controllable by the Patio Furniture Division Manager.**

PROBLEM 24-5A

(a)

DINKLE MANUFACTURING COMPANY
Home Division
Responsibility Report
For the Year Ended December 31, 2008
(in thousands of dollars)

	Budget	Actual	Difference Favorable F Unfavorable U
Sales	$1,400	$1,500	$100 F
Variable costs			
Cost of goods sold	640	700	60 U
Selling and administrative	100	125	25 U
Total	740	825	85 U
Contribution margin	660	675	15 F
Controllable direct fixed costs			
Cost of goods sold	170	170	0
Selling and administrative	80	80	0
Total	250	250	0
Controllable margin	$ 410	$ 425	$ 15 F
ROI	16.4% (1)	17% (2)	.6% F (3)

(1) $\left(\frac{\$410}{\$2,500}\right)$ (2) $\left(\frac{\$425}{\$2,500}\right)$ (3) $\left(\frac{\$15}{\$2,500}\right)$

(b) The performance of the manager of the Home Division was slightly above budget expectations for the year. The item that top management would likely investigate is the reason why variable cost of goods sold is $60,000 unfavorable. In making the inquiry, it should be recognized that the budget amount should be adjusted for the increased sales as follows: $1,500,000 X $\left(\frac{\$640}{\$1,400}\right)$ = $685,714. Thus, there should be an explanation of a $14,286 unfavorable difference.

PROBLEM 24-5A (Continued)

(c) (1) $$\frac{\$425,000 + (\$700,000 \text{ X } 6\%)}{\$2,500,000} = 18.7\%.$$

(2) $$\frac{\$425,000}{\$2,500,000 - (\$2,500,000 \text{ X } 10\%)} = 18.9\%.$$

(3) $$\frac{\$425,000 + \$90,000}{\$2,500,000} = 20.6\%.$$

PROBLEM 24-6A

(a) **No. 1**

To Cutting Department Manager—Seattle Division			Month: January
Controllable Costs:	**Budget**	**Actual**	**Fav/Unfav**
Indirect labor	$ 70,000	$ 73,000	$ 3,000 U
Indirect materials	46,000	47,700	1,700 U
Maintenance	18,000	20,500	2,500 U
Utilities	17,000	20,100	3,100 U
Supervision	20,000	22,000	2,000 U
Total	$171,000	$183,300	$12,300 U

No. 2

To Division Production Manager—Seattle			Month: January
Controllable Costs:	**Budget**	**Actual**	**Fav/Unfav**
Seattle Division	$ 51,000	$ 52,500	$ 1,500 U
Departments:			
Cutting	171,000	183,300	12,300 U
Shaping	148,000	158,000	10,000 U
Finishing	206,000	210,000	4,000 U
Total	$576,000	$603,800	$27,800 U

No. 3

To Vice President—Production			Month: January
Controllable Costs:	**Budget**	**Actual**	**Fav/Unfav**
V-P Production	$ 64,000	$ 65,000	$ 1,000 U
Divisions:			
Seattle	576,000	603,800	27,800 U
Denver	673,000	676,000	3,000 U
San Diego	715,000	722,000	7,000 U
Total	$2,028,000	$2,066,800	$38,800 U

No. 4

To President			Month: January
Controllable Costs:	**Budget**	**Actual**	**Fav/Unfav**
President	$ 74,200	$ 76,400	$ 2,200 U
Vice-Presidents:			
Production	2,028,000	2,066,800	38,800 U
Marketing	130,000	133,600	3,600 U
Finance	105,000	109,000	4,000 U
Total	$2,337,200	$2,385,800	$48,600 U

(b) (1) Within the Seattle division the rankings of the department managers were: (1) Finishing, (2) Shaping, and (3) Cutting. If the rankings were done on a percentage basis, they would rank as follows: (1) Finishing – 2.0 U (2) Shaping – 6.8 U and (3) Cutting – 7.2 U.

(2) At the division manager level, the rankings were: (1) Denver, (2) San Diego, and (3) Seattle.

(3) Rankings in terms of dollars may be somewhat misleading in this case because of the substantial difference between the production budget and the other budgets. On a percentage basis the differences and rankings are: (1) production, 1.9%; (2) marketing, 2.8%; and (3) finance, 3.8%.

PROBLEM 24-1B

(a)

CLARKE COMPANY
Flexible Monthly Manufacturing Overhead Budget
Assembly Department
For the Year 2008

Activity level				
Direct labor hours	**18,000**	**20,000**	**22,000**	**24,000**
Variable costs				
Indirect labor ($.30)	**$ 5,400**	**$ 6,000**	**$ 6,600**	**$ 7,200**
Indirect materials ($.20)	**3,600**	**4,000**	**4,400**	**4,800**
Repairs ($.10)	**1,800**	**2,000**	**2,200**	**2,400**
Utilities ($.21)	**3,780**	**4,200**	**4,620**	**5,040**
Lubricants ($.04)	**720**	**800**	**880**	**960**
Total variable costs ($.85)	**15,300**	**17,000**	**18,700**	**20,400**
Fixed costs				
Supervision	**6,000**	**6,000**	**6,000**	**6,000**
Depreciation	**3,000**	**3,000**	**3,000**	**3,000**
Insurance	**1,000**	**1,000**	**1,000**	**1,000**
Rent	**750**	**750**	**750**	**750**
Property taxes	**500**	**500**	**500**	**500**
Total fixed costs	**11,250**	**11,250**	**11,250**	**11,250**
Total costs	**$26,550**	**$28,250**	**$29,950**	**$31,650**

PROBLEM 24-1B (Continued)

(b)

CLARKE COMPANY
Manufacturing Overhead Budget Report (Flexible)
Assembly Department
For the Month Ended January 31, 2008

Direct labor hours (DLH)	Budget at 20,000 DLH	Actual Costs 20,000 DLH	Difference Favorable F Unfavorable U
Variable costs			
Indirect labor	$ 6,000	$ 6,200	$200 U
Indirect materials	4,000	3,600	400 F
Repairs	2,000	1,600	400 F
Utilities	4,200	3,300	900 F
Lubricants	800	830	30 U
Total variable costs	17,000	15,530	1,470 F
Fixed costs			
Supervision	6,000	6,000	0
Depreciation	3,000	3,000	0
Insurance	1,000	1,000	0
Rent	750	800	50 U
Property taxes	500	500	0
Total fixed costs	11,250	11,300	50 U
Total costs	$28,250	$26,830	$1,420 F

(c) Control over both variable and fixed costs was good.

PROBLEM 24-2B

(a)

FLAHERTY MANUFACTURING COMPANY
Flexible Monthly Manufacturing Overhead Budget
Assembly Department
For the Year 2008

Activity level				
Direct labor hours	22,500	25,000	27,500	30,000
Variable costs				
Indirect labor ($1.20)	$27,000	$30,000	$33,000	$36,000
Indirect materials ($.70)	15,750	17,500	19,250	21,000
Utilities ($.30)	6,750	7,500	8,250	9,000
Maintenance ($.20)	4,500	5,000	5,500	6,000
Total variable costs ($2.40)	54,000	60,000	66,000	72,000
Fixed costs				
Supervision	12,500	12,500	12,500	12,500
Depreciation	10,000	10,000	10,000	10,000
Insurance and taxes	5,000	5,000	5,000	5,000
Total fixed costs	27,500	27,500	27,500	27,500
Total costs	$81,500	$87,500	$93,500	$99,500

PROBLEM 24-2B (Continued)

(b)

FLAHERTY MANUFACTURING COMPANY
Assembly Department
Manufacturing Overhead Budget Report (Flexible)
For the Month Ended July 31, 2008

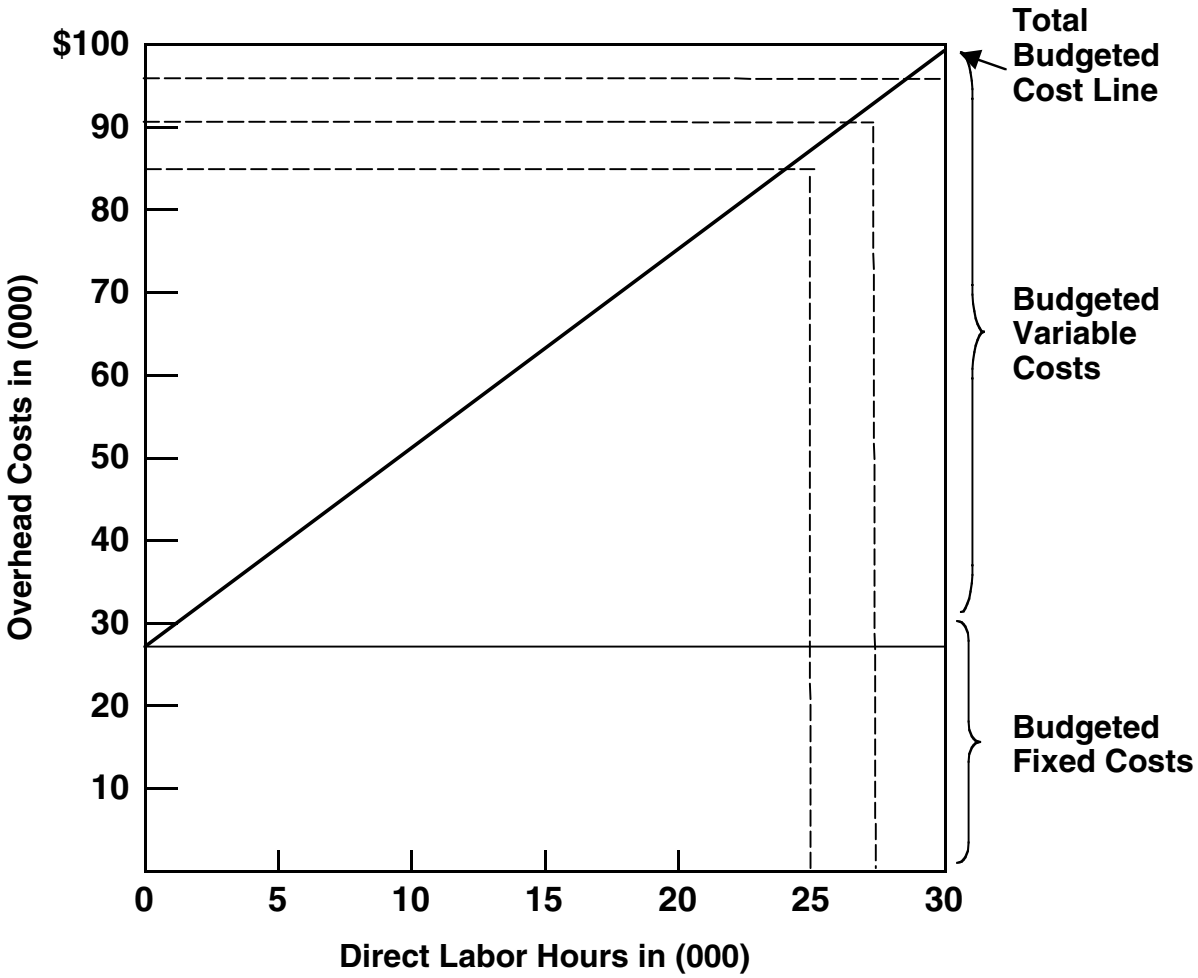
Direct labor hours (DLH)	Budget at 27,500 DLH	Actual Costs 27,500 DLH	Difference Favorable F Unfavorable U
Variable costs			
Indirect labor	$33,000	$32,000	$1,000 F
Indirect materials	19,250	17,000	2,250 F
Utilities	8,250	8,100	150 F
Maintenance	5,500	5,400	100 F
Total variable costs	66,000	62,500	3,500 F
Fixed costs			
Supervision	12,500	12,500	0
Depreciation	10,000	10,000	0
Insurance and taxes	5,000	5,000	0
Total fixed costs	27,500	27,500	0
Total costs	$93,500	$90,000	$3,500 F

(c) Based on the above budget report, control over costs was effective. For variable costs, all differences were favorable. For fixed costs, there were no differences between budgeted and actual costs.

(d) The formula is fixed costs of $27,500 plus total variable costs of $2.40 per direct labor hour.

PROBLEM 24-2B (Continued)

(e)



PROBLEM 24-3B

(a) The formula is fixed costs $20,000 plus total variable costs of $2.70 per unit ($135,000 ÷ 50,000 units).

(b)

HARDESTY COMPANY
Packaging Department
Budget Report (Flexible)
For the Month Ended May 31, 2008

Units	Budget at 55,000 Units	Actual Costs 55,000 Units	Difference Favorable F Unfavorable U
Variable costs*			
Direct materials ($.90 X 55,000)	$ 49,500	$ 47,000	$2,500 F
Direct labor ($1.00 X 55,000)	55,000	53,000	2,000 F
Indirect materials ($.30 X 55,000)	16,500	15,200	1,300 F
Indirect labor ($.25 X 55,000)	13,750	13,000	750 F
Utilities ($.15 X 55,000)	8,250	7,100	1,150 F
Maintenance ($.10 X 55,000)	5,500	5,200	300 F
Total variable costs ($2.70 X 55,000)	148,500	140,500	8,000 F
Fixed costs			
Rent	8,000	8,000	0
Supervision	7,000	7,000	0
Depreciation	5,000	5,000	0
Total fixed costs	20,000	20,000	0
Total costs	$168,500	$160,500	$8,000 F

*Note that the per unit variable costs are computed by taking the budget amount at 50,000 units and dividing it by 50,000. For example, direct materials per unit is $0.90 or $\frac{\$45,000}{50,000}$.

This report provides a better basis for evaluating performance because the budget is based on the level of activity actually achieved.

PROBLEM 24-3B (Continued)

(c)

HARDESTY COMPANY
Packaging Department
Budget Report (Flexible)
For the Month Ended June 30, 2008

			Difference
	Budget at	Actual Costs	Favorable F
Units	40,000 Units	40,000 Units	Unfavorable U
Variable costs			
Direct materials ($.90 X 40,000)	$ 36,000	$ 37,600*	$1,600 U
Direct labor ($1.00 X 40,000)	40,000	42,400	2,400 U
Indirect materials ($.30 X 40,000)	12,000	12,160	160 U
Indirect labor ($.25 X 40,000)	10,000	10,400	400 U
Utilities ($.15 X 40,000)	6,000	5,680	320 F
Maintenance ($.10 X 40,000)	4,000	4,160	160 U
Total variable costs ($2.70 X 40,000)	108,000	112,400	4,400 U
Fixed costs			
Rent	8,000	8,000	0
Supervision	7,000	7,000	0
Depreciation	5,000	5,000	0
Total fixed costs	20,000	20,000	0
Total costs	$128,000	$132,400	$4,400 U

***Note that the actual variable costs in June was 20% less than the actual costs in May. Therefore to find the actual costs in June, the actual variable costs in May are multiplied by 80% as follows.**

	May (actual)		June (actual)
Direct materials	$ 47,000 X 80%	=	$ 37,600
Direct labor	53,000 X 80%		42,400
Indirect materials	15,200 X 80%		12,160
Indirect labor	13,000 X 80%		10,400
Utilities	7,100 X 80%		5,680
Maintenance	5,200 X 80%		4,160
	$140,500		$112,400

PROBLEM 24-4B

(a)

GRIDER MANUFACTURING INC.
Home Appliance Division
Responsibility Report
For the Year Ended December 31, 2008

	Budget	Actual	Difference Favorable F Unfavorable U
Sales	$2,400,000	$2,310,000	$ 90,000 U
Variable costs			
Cost of goods sold	1,200,000	1,240,000	40,000 U
Selling and administrative	240,000	232,000	8,000 F
Total	1,440,000	1,472,000	32,000 U
Contribution margin	960,000	838,000	122,000 U
Controllable fixed costs			
Cost of goods sold	200,000	192,000	8,000 F
Selling and administrative	60,000	66,000	6,000 U
Total	260,000	258,000	2,000 F
Controllable margin	$ 700,000	$ 580,000	$120,000 U

(b) **The manager did not effectively control revenues and costs. Contribution margin was $122,000 unfavorable and controllable margin was $120,000 unfavorable. Contribution margin was unfavorable primarily because sales were $90,000 under budget and variable cost of goods sold was $40,000 over budget. Apparently, the manager was unable to control variable cost of goods sold when sales failed to meet budget expectations.**

The manager was effective in controlling fixed costs. However, the favorable difference of $2,000 was only 1.6% of the unfavorable difference in contribution margin.

PROBLEM 24-4B (Continued)

(c) Two costs are excluded from the report: (1) noncontrollable fixed costs and (2) indirect fixed costs. The reason is that neither cost is controllable by the Home Appliance Division Manager.

PROBLEM 24-5B

(a)

JEFFERY MANUFACTURING COMPANY
Lawnmower Division
Responsibility Performance Report
For the Year Ended December 31, 2008
(in thousands of dollars)

	Budget	Actual	Difference Favorable F Unfavorable U
Sales	$2,950	$2,800	$150 U
Variable costs			
Cost of goods sold	1,320	1,400	80 U
Selling and administrative	350	300	50 F
Total	1,670	1,700	30 U
Contribution margin	1,280	1,100	180 U
Controllable fixed costs			
Cost of goods sold	270	270	0
Selling and administrative	130	130	0
Total	400	400	0
Controllable margin	$ 880	$ 700	$180 U
ROI	17.6% (1)	14% (2)	3.6% U (3)

(1) $\left(\frac{\$880}{\$5,000}\right)$ (2) $\left(\frac{\$700}{\$5,000}\right)$ (3) $\left(\frac{\$180}{\$5,000}\right)$

(b) The performance of the manager of the Lawnmower Division was below budget expectations for the year. The item that top management would likely investigate first is the reason why sales were $150,000 below budget. Next, inquiry would be made as to the reason variable cost of goods sold is $80,000 unfavorable. Finally, the reasons for the favorable variable selling and administrative expenses would be discussed. It is conceivable that an inadequate selling effort contributed to the lower sales.

PROBLEM 24-5B (Continued)

(c) (1) [$700,000 + ($1,400,000 X 15%)] ÷ $5,000,000 = 18.2%.
(2) $700,000 ÷ [$5,000,000 – ($5,000,000 X 20%)] = 17.5%.
(3) ($700,000 + $200,000) ÷ $5,000,000 = 18%.

BYP 24-1 DECISION MAKING ACROSS THE ORGANIZATION

(a) (1) The primary causes of the loss in net income were the decrease in the number of boarding days and the decrease in the boarding fee. The number of boarding days decreased by 2,920 or approximately 13% (2,920 days ÷ 21,900 days), and the boarding fee decreased from $25[(a)] per day to $20[(b)] per day, a decrease of 20% ($5 ÷ $25). Together these resulted in a $167,900 decrease in sales revenue, a decrease of approximately 31% ($167,900 ÷ $547,500).

[(a)]$547,500 ÷ 21,900 days = $25 per day
[(b)]$379,600 ÷ 18,980 days = $20 per day

(2) Management did a poor job in controlling variable expenses. Given that boarding days declined by about 13%, variable expenses should decline by about 13%, or more precisely, variable expenses should decline by $25,842 $\left(\$193{,}815 \text{ X } \frac{2{,}920}{21{,}900} \right)$. However, variable expenses only declined by $14,335 or about 7% ($14,335 ÷ $193,815). Thus, management did a poor job in controlling variable expenses. Management did a better job in controlling fixed expenses. Fixed expenses were under budget by $5,000 and this includes the additional expenses incurred in advertising and entertainment.

(3) Management's decisions to stay competitive probably were sound. Given the decline in boarding days, the decision not to replace the worker was sound. The decision to reduce rates was probably forced by the competition. Without the additional advertising and entertainment expenses, the loss in net income might have been even greater.

(b)

G-BAR PASTURES
Income Statement
Flexible Budget Report
For the Year Ended December 31, 2008

Boarding days (BD)	Budget at 18,980 BD	Actual at 18,980 BD	Difference Favorable F Unfavorable U
Sales ($25)	$474,500	$379,600	$ 94,900 U
Less variable expenses			
Feed ($5)	94,900	104,390	9,490 U
Veterinary fees ($3)	56,940	58,838	1,898 U
Blacksmith fees ($.30)	5,694	6,074	380 U
Supplies ($.55)	10,439	10,178	261 F
Total variable expenses ($8.85)	167,973	179,480	11,507 U
Contribution margin	306,527	200,120	106,407 U
Less fixed expenses			
Depreciation	40,000	40,000	$ 0
Insurance	11,000	11,000	0
Utilities	14,000	12,000	2,000 F
Repairs and maintenance	11,000	10,000	1,000 F
Labor	96,000	88,000	8,000 F
Advertising	8,000	12,000	4,000 U
Entertainment	5,000	7,000	2,000 U
Total fixed expenses	185,000	180,000	5,000 F
Net income	$121,527	$ 20,120	$101,407 U

(c) (1) **The primary causes of the decrease in net income are the decreases in boarding rates and volume. The average daily rate charged was $20 = ($379,600 ÷ 18,980). This rate resulted in a decrease in sales revenue of $94,900 or 20% = ($94,900 ÷ $474,500).**

Given that it is "an extremely competitive business," if G-Bar Pastures had not reduced rates, boarding days almost certainly would have declined even more.

(2) Management did a poor job of controlling variable expenses. These expenses in total were $11,507 over budget or 7%, or ($11,507 ÷ $167,973).

Moreover, each individual variable expense was over budget, except for supplies. Management did a good job of controlling fixed expenses as noted in part (a).

(3) As noted in part (a), management's decisions to stay competitive probably were sound.

(d) Given that the industry is "extremely competitive," management should consider two options. One, become the lowest cost operator. If G-Bar Pastures is the company with the lowest operating costs, it can underprice its competitors and take customers away from them (increasing its sales). Eventually, some of its competitors (those with the highest operating costs) will go out of business, and G-Bar Pastures will get their customers, or at least some of them. (Wal-Mart is an example of this strategy.)

Option two is to offer its customers a superior product or service. If customers perceive that G-Bar Pastures is the "best" boarding stable in Kentucky, the company will take customers away from its competitors. Also, if G-Bar Pastures is perceived as the "best," many customers will be willing to pay a premium for its boarding service, and G-Bar Pastures will be able to raise its rates. (Gillette is an example of this strategy.)

(a) ***Jane Duncan—Profit Center:*** **Responsible for sales, inventory cost, advertising, sales personnel, printing, and travel. She is not responsible for the assets invested in her division and probably does not control the rent or depreciation costs either. As a profit center manager she might have control of the insurance, but she probably does not.**

Richard Wayne—Cost Center: **Responsible for inventory cost, advertising, sales personnel, printing, and travel. As a cost center manager, he might or might not have control of rent and insurance costs, but he probably does not. He does not have control of the assets invested in his department; thus, he does not have control of the depreciation.**

Jose Lopez—Investment Center: **Responsible for all items shown.**

(b) ***Jane Duncan Budget differences:*** **The inventory cost is 30% ($45,000 ÷ $150,000) above budget and so should definitely be brought to her attention. Travel is 25% ($5,000 ÷ $20,000) below budget. Students may differ as to whether they believe that this should be brought to her attention. The differences in rent and depreciation should not be brought to her attention because she does not control those costs.**

Richard Wayne Budget differences: **The inventory cost, which is 20% ($20,000 ÷ $100,000) above budget, should definitely be brought to his attention. Travel costs are 33% ($10,000 ÷ $30,000) below budget. This should probably be brought to his attention, so that he can make sure that the purpose that was to have been served by travel is being adequately served by other means. The 67% ($20,000 ÷ $30,000) increase in rent and 10% ($10,000 ÷ $100,000) decrease in depreciation are not under his control and so should not be brought to his attention. It should probably be pointed out to students that all budget differences are monitored by someone within the company. These differences that are not the responsibility of the various managers are still within the scope of top management's responsibility.**

Jose Lopez Budget differences: **As manager of an investment center, Mr. Lopez is responsible for all categories of the budget. The selection in this case would be which differences merit his attention. Any**

decrease in a company's gross profit rate (gross profit ÷ sales) is a cause for concern. (Remember the gross profit is sales minus cost of goods sold.) Thus, the 5% increase in cost of goods sold should be brought to his attention. Travel is below budget 25% ($500 ÷ $2,000), which is $500. This is not a large percentage of total costs, nor is it a large dollar amount, so there could be an argument that this should be left out. The 20% ($2,000 ÷ $10,000) increase in rent is only a $2,000 increase, so it could be included, though it might be left out as immaterial. The 50% ($20,000 ÷ $40,000) increase in depreciation should definitely be included.

(a) The company's costs do not increase proportionately with the revenues increase in the third and fourth quarter because the behavior of the costs is primarily fixed.

(b) Static budgeting seems to be most appropriate for Computer Associates because costs do not respond proportionately with changes in the activity level (revenues).

Number of Guests	200	225	250
Variable Costs			
Food ($6.40)	$1,280	$1,440	$1,600
Bar ($1.60)	320	360	400
Rentals ($1.20)	240	270	300
Paper products (postage, invitations, programs) ($1.20)	240	270	300
Favors ($0.60)	120	135	150
Total variable costs ($11.00)	2,200	2,475	2,750
Fixed Costs			
Hall	900	900	900
Photographer	800	800	800
Gifts for attendants	500	500	500
DJ	425	425	425
Quintet	400	400	400
Bride's attire (dress, veil, shoes)	270	270	270
Groom's attire (tuxedo)	0	0	0
Other food (rehearsal dinner/cake)	250	250	250
Flowers	200	200	200
Other decorations	100	100	100
Ceremony centerpiece	60	60	60
Vases	50	50	50
Miscellaneous (officiant, hotel, cameras, license, part rental, guest book)	395	395	395
Total fixed costs	4,350	4,350	4,350
Total costs	$6,550	$6,825	$7,100

BYP 24-5 COMMUNICATION ACTIVITY

(a) Mark Farris should be able to control all the variable expenses and the fixed expenses of supervision (but not his portion) and inspection. Insurance and depreciation ordinarily are not the responsibility of the department manager.

(b) The total variable cost per unit is $26 ($52,000 ÷ 2,000). The total cost during the month to manufacture 1,500 units is variable costs $39,000 (1,500 X $26) plus fixed costs ($36,000) or $75,000 ($39,000 + $36,000).

(c)

EDMONDS COMPANY
Production Department
Manufacturing Overhead Budget Report (Flexible)
For the Month Ended _____

	Budget at 1,500 units	Actual at 1,500 units	Difference Favorable F Unfavorable U
Variable costs			
Indirect materials	$18,000	$24,200	$ 6,200 U
Indirect labor	9,000	13,500	4,500 U
Maintenance expense	7,500	8,200	700 U
Manufacturing supplies	4,500	5,100	600 U
Total variable	39,000	51,000	12,000 U
Fixed costs			
Supervision	18,000	19,300	1,300 U
Inspection costs	1,000	1,200	200 U
Insurance expense	2,000	2,200	200 U
Depreciation	15,000	14,700	300 F
Total fixed	36,000	37,400	1,400 U
Total costs	$75,000	$88,400	$13,400 U

(d) A production department is a cost center. Thus, the report should include only the costs that are controllable by the production manager. This report is shown in Illustration 24-21. In this type of report, no distinction is made between variable and fixed costs.

EDMONDS COMPANY
Production Department
Manufacturing Overhead Responsibility Report
For the Month Ended _____

Controllable Cost	Budget	Actual	Difference Favorable F Unfavorable U
Indirect materials	$18,000	$24,200	$ 6,200 U
Indirect labor	9,000	13,500	4,500 U
Maintenance expense	7,500	8,200	700 U
Manufacturing supplies	4,500	5,100	600 U
Supervision*	8,000	9,300	1,300 U
Inspection costs	1,000	1,200	200 U
Total	$48,000	$61,500	$13,500 U

*$10,000 is deducted from both budget and actual for Mr. Farris's cost.

To: Mr. Mark Farris, Production Manager

From: _____, Vice President of Production

Subject: Performance Evaluation for the Month of XXXXX

Your performance in controlling costs that are your responsibility was very disappointing in the month of XXXXX. As indicated in the accompanying responsibility report, total costs were $13,500 over budget. On a percentage basis, costs were 28% over budget. As you can see, actual costs were over budget for every cost item. In two instances, costs were more significantly over budget (Indirect materials 34% and Indirect labor 50%).

BYP 24-5 (Continued)

Mark, it is imperative that you get costs under control in your department as soon as possible.

I think we need to talk about ways to implement more effective cost control measures. I would like to meet with you in my office at 9 a.m. on Wednesday to discuss possible alternatives.

(a) The stakeholders in this ethical situation are:

- **The employees and managers of each investment center.**
- **The central management and chief executive officer.**
- **The customers who buy the product.**
- **The owners or stockholders.**

(b) Pressure to perform is a frequently identified cause for unethical conduct. Employees are more prone to engage in unethical conduct when unreasonable demands are made upon them. Rather than lose their jobs or be demoted, if given no alternatives, employees may seek to cut corners, reduce quality control, use questionable sales tactics, and bend the rules.

(c) The company might maintain open lines of communication with its employees to better know the pressures of its managers. By "keeping in touch," the company may avoid making unreasonable demands on its managers and employees. The company might also develop a company code of ethical conduct and enforce it. However, if dismissal or demotion continues to be the probable consequence of failure to meet objectives, some managers are likely to engage in unethical behavior in an attempt to meet the objectives.

BYP 24-7 ALL ABOUT YOU ACTIVITY

(a) The basic idea is to set up individual envelopes for different expense categories. Once you have used up the money in a particular envelope you can't use more. Begin by preparing a monthly budget. Identify those items that you will pay in cash. These would include things like groceries, eating out at restaurants, clothing, gasoline, car repairs, gifts, and entertainment. These are the categories for which you will have envelopes. Next, decide how often to fill the envelopes and determine the amount to put in each envelope. If you continually run out of money in a particular envelope you many need to re-evaluate your allocation. If you don't use up all the money in an envelope in one month you can carry it over to the next month.

(b) Answers will vary by student.