

Chapter 9

Profit Planning

Solutions to Questions

9-1 A budget is a detailed plan outlining the acquisition and use of financial and other resources over a given time period. As such, it represents a plan for the future expressed in formal quantitative terms. Budgetary control involves the use of budgets to control the *actual* activities of a firm.

9-2

1. Budgets provide a means of communicating management's plans throughout the organization.

2. Budgets force managers to think about and plan for the future.

3. The budgeting process provides a means of allocating resources to those parts of the organization where they can be used most effectively.

4. The budgeting process can uncover potential bottlenecks before they occur.

5. Budgets coordinate the activities of the entire organization. Budgeting helps to ensure that everyone in the organization is pulling in the same direction.

6. Budgets define goals and objectives that can serve as benchmarks for evaluating subsequent performance.

9-3 Responsibility accounting is a system in which a manager is held responsible for those items of revenues and costs—and only those items—that the manager can control to a significant extent. Each line item in the budget is made the responsibility of a manager who is then held responsible for differences between budgeted and actual results.

9-4 A master budget represents a summary of all of management's plans and goals for the future, and outlines the way in which these plans are to be accomplished. The master budget is composed of a number of smaller,

specific budgets encompassing sales, production, raw materials, direct labor, manufacturing overhead, selling and administrative expenses, and inventories. The master budget generally also contains a budgeted income statement, budgeted balance sheet, and cash budget.

9-5 The level of sales impacts virtually every other aspect of the firm's activities. It determines the production budgets, cash collections, cash disbursements, and selling and administrative budgets that in turn determine the cash budget and budgeted income statement and balance sheet.

9-6 No. Planning and control are different, although related, concepts. Planning involves developing objectives and formulating steps to achieve those objectives. Control, by contrast, involves the means by which management ensures that the objectives set down at the planning stage are attained.

9-7 The flow of information moves in two directions—upward and downward. The initial flow should be from the bottom of the organization upward. Each person having responsibility over revenues or costs should prepare the budget data against which his or her subsequent performance will be measured. As the budget data are communicated upward, higher-level managers should review the budgets for consistency with the overall goals of the organization and the plans of other units in the organization. Any issues should be resolved in discussions between the individuals who prepared the budgets and their managers.

All levels of an organization should participate in the budgeting process—not just top management or the accounting department. Generally, the lower levels will be more familiar with detailed, day-to-day operating data, and for

this reason will have primary responsibility for developing the specifics in the budget. Top levels of management will have a better perspective concerning the company's strategy.

9-8 A self-imposed budget is one in which persons with responsibility over cost control prepare their own budgets, i.e., the budget is not imposed from above. The major advantages are: (1) the views and judgments of persons from all levels of an organization are represented in the final budget document; (2) budget estimates generally are more accurate and reliable, since they are prepared by those who are closest to the problems; (3) managers generally are more motivated to meet budgets which they have participated in setting; (4) self-imposed budgets reduce the amount of upward "blaming" resulting from inability to meet budget goals. One caution must be exercised in the use of self-imposed budgets. The budgets prepared by lower-level managers should be carefully reviewed to prevent too much slack.

9-9 Budgeting can assist a firm in its employment policies by providing information on probable future staffing needs. Budgeting can also assist in stabilizing a company's work force. By careful planning through the budget process, a company can often "smooth out" its activities and avoid erratic hiring and laying off employees.

9-10 No, although this is clearly one of the purposes of the cash budget. The principal purpose is to provide information on probable cash needs *during* the budget period, so that bank loans and other sources of financing can be anticipated and arranged well in advance.

9-11 Zero-based budgeting requires that managers start at zero levels every year and justify all costs as if all programs were being proposed for the first time. In traditional budgeting, by contrast, budgets are usually based on the previous year's data.

Exercise 9-1 (20 minutes)

1.	<i>April</i>	<i>May</i>	<i>June</i>	<i>Total</i>
February sales:				
\$230,000 × 10%.....	\$ 23,000			\$ 23,000
March sales: \$260,000				
× 70%, 10%.....	182,000	\$ 26,000		208,000
April sales: \$300,000 ×				
20%, 70%, 10%	60,000	210,000	\$ 30,000	300,000
May sales: \$500,000 ×				
20%, 70%		100,000	350,000	450,000
June sales: \$200,000 ×				
20%.....			<u>40,000</u>	<u>40,000</u>
Total cash collections.....	<u>\$265,000</u>	<u>\$336,000</u>	<u>\$420,000</u>	<u>\$1,021,000</u>

Observe that even though sales peak in May, cash collections peak in June. This occurs because the bulk of the company's customers pay in the month following sale. The lag in collections that this creates is even more pronounced in some companies. Indeed, it is not unusual for a company to have the least cash available in the months when sales are greatest.

2. Accounts receivable at June 30:

From May sales: \$500,000 × 10%.....	\$ 50,000
From June sales: \$200,000 × (70% + 10%)	<u>160,000</u>
Total accounts receivable at June 30.....	<u>\$210,000</u>

Exercise 9-2 (10 minutes)

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Budgeted sales in units.....	50,000	75,000	90,000	215,000
Add desired ending inventory* ...	<u>7,500</u>	<u>9,000</u>	<u>8,000</u>	<u>8,000</u>
Total needs.....	57,500	84,000	98,000	223,000
Less beginning inventory	<u>5,000</u>	<u>7,500</u>	<u>9,000</u>	<u>5,000</u>
Required production	<u>52,500</u>	<u>76,500</u>	<u>89,000</u>	<u>218,000</u>

*10% of the following month's sales in units.

Exercise 9-3 (15 minutes)

	<i>Year 2</i>				<i>Year 3</i>
	<i>First</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	<i>First</i>
Required production in bottles.....	60,000	90,000	150,000	100,000	70,000
Number of grams per bottle	<u>× 3</u>	<u>× 3</u>	<u>× 3</u>	<u>× 3</u>	<u>× 3</u>
Total production needs—grams.....	<u>180,000</u>	<u>270,000</u>	<u>450,000</u>	<u>300,000</u>	<u>210,000</u>

	<i>Year 2</i>				<i>Year</i>
	<i>First</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	<i>Year</i>
Production needs—grams (above)	180,000	270,000	450,000	300,000	1,200,000
Add desired ending inventory—grams	<u>54,000</u>	<u>90,000</u>	<u>60,000</u>	<u>42,000</u>	<u>42,000</u>
Total needs—grams	234,000	360,000	510,000	342,000	1,242,000
Less beginning inventory—grams.....	<u>36,000</u>	<u>54,000</u>	<u>90,000</u>	<u>60,000</u>	<u>36,000</u>
Raw materials to be purchased— grams.....	<u>198,000</u>	<u>306,000</u>	<u>420,000</u>	<u>282,000</u>	<u>1,206,000</u>
Cost of raw materials to be purchased at 150 roubles per kilogram	<u>29,700</u>	<u>45,900</u>	<u>63,000</u>	<u>42,300</u>	<u>180,900</u>

Exercise 9-4 (20 minutes)

1. Assuming that the direct labor workforce is adjusted each quarter, the direct labor budget would be:

	<i>1st Quarter</i>	<i>2nd Quarter</i>	<i>3rd Quarter</i>	<i>4th Quarter</i>	<i>Year</i>
Units to be produced.....	8,000	6,500	7,000	7,500	29,000
Direct labor time per unit (hours)	<u>× 0.35</u>	<u>× 0.35</u>	<u>× 0.35</u>	<u>× 0.35</u>	<u>× 0.35</u>
Total direct labor-hours needed	2,800	2,275	2,450	2,625	10,150
Direct labor cost per hour	<u>× \$12.00</u>	<u>× \$12.00</u>	<u>× \$12.00</u>	<u>× \$12.00</u>	<u>× \$12.00</u>
Total direct labor cost.....	<u>\$ 33,600</u>	<u>\$ 27,300</u>	<u>\$ 29,400</u>	<u>\$ 31,500</u>	<u>\$121,800</u>

2. Assuming that the direct labor workforce is not adjusted each quarter and that overtime wages are paid, the direct labor budget would be:

	<i>1st Quarter</i>	<i>2nd Quarter</i>	<i>3rd Quarter</i>	<i>4th Quarter</i>	<i>Year</i>
Units to be produced.....	8,000	6,500	7,000	7,500	29,000
Direct labor time per unit (hours).....	<u>× 0.35</u>	<u>× 0.35</u>	<u>× 0.35</u>	<u>× 0.35</u>	<u>× 0.35</u>
Total direct labor-hours needed	2,800	2,275	2,450	2,625	10,150
Regular hours paid.....	<u>2,600</u>	<u>2,600</u>	<u>2,600</u>	<u>2,600</u>	<u>10,400</u>
Overtime hours paid	<u>200</u>	<u>-</u>	<u>-</u>	<u>25</u>	<u>225</u>
Wages for regular hours (@ \$12.00 per hour) ...	\$31,200	\$31,200	\$31,200	\$31,200	\$124,800
Overtime wages (@ \$12.00 per hour × 1.5).....	<u>3,600</u>	<u>-</u>	<u>-</u>	<u>450</u>	<u>4,050</u>
Total direct labor cost	<u>\$34,800</u>	<u>\$31,200</u>	<u>\$31,200</u>	<u>\$31,650</u>	<u>\$128,850</u>

Exercise 9-5 (15 minutes)

1.

Yuvwell Corporation
Manufacturing Overhead Budget

	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>Year</i>
	<i>Quarter</i>	<i>Quarter</i>	<i>Quarter</i>	<i>Quarter</i>	<i>Year</i>
Budgeted direct labor-hours.....	8,000	8,200	8,500	7,800	32,500
Variable overhead rate	× \$3.25	× \$3.25	× \$3.25	× \$3.25	× \$3.25
Variable manufacturing overhead	\$26,000	\$26,650	\$27,625	\$25,350	\$105,625
Fixed manufacturing overhead	<u>48,000</u>	<u>48,000</u>	<u>48,000</u>	<u>48,000</u>	<u>192,000</u>
Total manufacturing overhead	74,000	74,650	75,625	73,350	297,625
Less depreciation	<u>16,000</u>	<u>16,000</u>	<u>16,000</u>	<u>16,000</u>	<u>64,000</u>
Cash disbursements for manufacturing overhead....	<u>\$58,000</u>	<u>\$58,650</u>	<u>\$59,625</u>	<u>\$57,350</u>	<u>\$233,625</u>

2. Total budgeted manufacturing overhead for the year (a) ... \$297,625
 Total budgeted direct labor-hours for the year (b) 32,500
 Manufacturing overhead rate for the year (a) ÷ (b) \$ 9.16

Exercise 9-6 (15 minutes)

Weller Company
Selling and Administrative Expense Budget

	<i>1st</i> <i>Quarter</i>	<i>2nd</i> <i>Quarter</i>	<i>3rd</i> <i>Quarter</i>	<i>4th</i> <i>Quarter</i>	<i>Year</i>
Budgeted unit sales	15,000	16,000	14,000	13,000	58,000
Variable selling and administrative expense per unit.....	<u>× \$2.50</u>	<u>× \$2.50</u>	<u>× \$2.50</u>	<u>× \$2.50</u>	<u>× \$2.50</u>
Variable expense	<u>\$ 37,500</u>	<u>\$ 40,000</u>	<u>\$ 35,000</u>	<u>\$ 32,500</u>	<u>\$145,000</u>
Fixed selling and administrative expenses:					
Advertising	8,000	8,000	8,000	8,000	32,000
Executive salaries	35,000	35,000	35,000	35,000	140,000
Insurance.....	5,000		5,000		10,000
Property taxes		8,000			8,000
Depreciation.....	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>80,000</u>
Total fixed expense	<u>68,000</u>	<u>71,000</u>	<u>68,000</u>	<u>63,000</u>	<u>270,000</u>
Total selling and administrative expenses	105,500	111,000	103,000	95,500	415,000
Less depreciation.....	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>80,000</u>
Cash disbursements for selling and administra- tive expenses	<u>\$ 85,500</u>	<u>\$ 91,000</u>	<u>\$ 83,000</u>	<u>\$ 75,500</u>	<u>\$335,000</u>

Exercise 9-7 (20 minutes)

	<i>Quarter (000 omitted)</i>				<i>Year</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	
Cash balance, beginning	\$ 6 *	\$ 5	\$ 5	\$ 5	\$ 6
Add collections from customers	<u>65</u>	<u>70</u>	<u>96</u> *	<u>92</u>	<u>323</u> *
Total cash available	<u>71</u> *	<u>75</u>	<u>101</u>	<u>97</u>	<u>329</u>
Less disbursements:					
Purchase of inventory.....	35 *	45 *	48	35 *	163
Operating expenses	28	30 *	30 *	25	113 *
Equipment purchases.....	8 *	8 *	10 *	10	36 *
Dividends.....	<u>2</u> *	<u>2</u> *	<u>2</u> *	<u>2</u> *	<u>8</u>
Total disbursements.....	<u>73</u>	<u>85</u> *	<u>90</u>	<u>72</u>	<u>320</u>
Excess (deficiency) of cash available over disbursements	<u>(2)</u> *	<u>(10)</u>	<u>11</u> *	<u>25</u>	<u>9</u>
Financing:					
Borrowings.....	7	15 *	—	—	22
Repayments (including interest).....	<u>—</u>	<u>—</u>	<u>(6)</u>	<u>(17)</u> *	<u>(23)</u>
Total financing	<u>7</u>	<u>15</u>	<u>(6)</u>	<u>(17)</u>	<u>(1)</u>
Cash balance, ending.....	<u>\$ 5</u>	<u>\$ 5</u>	<u>\$ 5</u>	<u>\$ 8</u>	<u>\$ 8</u>

*Given.

Problem 9-8 (30 minutes)

1. The budget at Springfield is an imposed "top-down" budget that fails to consider both the need for realistic data and the human interaction essential to an effective budgeting/control process. The President has not given any basis for his goals, so one cannot know whether they are realistic for the company. True participation of company employees in preparation of the budget is minimal and limited to mechanical gathering and manipulation of data. This suggests there will be little enthusiasm for implementing the budget.

The sales by product line should be based on an accurate sales forecast of the potential market. Therefore, the sales by product line should have been developed first to derive the sales target rather than the reverse.

The initial meeting between the Vice President of Finance, Executive Vice President, Marketing Manager, and Production Manager should be held earlier. This meeting is held too late in the budget process.

2. Springfield should consider adopting a "bottom-up" budget process. This means that the people responsible for performance under the budget would participate in the decisions by which the budget is established. In addition, this approach requires initial and continuing involvement of sales, financial, and production personnel to define sales and profit goals that are realistic within the constraints under which the company operates. Although time consuming, the approach should produce a more acceptable, honest, and workable goal-control mechanism.

The sales forecast should be developed considering internal sales-forecasts as well as external factors. Costs within departments should be divided into fixed and variable, controllable and noncontrollable, discretionary and nondiscretionary. Flexible budgeting techniques could then allow departments to identify costs that can be modified in the planning process.

Problem 9-8 (continued)

3. The functional areas should not necessarily be expected to cut costs when sales volume falls below budget. The time frame of the budget (one year) is short enough so that many costs are relatively fixed. For costs that are fixed, there is little hope for a reduction as a consequence of short-run changes in volume. However, the functional areas should be expected to cut costs should sales volume fall below target when:
- a. control is exercised over the costs within their function.
 - b. budgeted costs were more than adequate for the originally targeted sales, i.e., slack was present.
 - c. budgeted costs vary to some extent with changes in sales.
 - d. there are discretionary costs that can be delayed or omitted with no serious effect on the department.

(Adapted unofficial CMA Solution)

Problem 9-9 (45 minutes)

1. Schedule of expected cash collections:

	<i>Month</i>			<i>Quarter</i>
	<i>July</i>	<i>August</i>	<i>September</i>	
From accounts receivable:				
May sales				
\$250,000 × 3%	\$ 7,500			\$ 7,500
June sales				
\$300,000 × 70%	210,000			210,000
\$300,000 × 3%		\$ 9,000		9,000
From budgeted sales:				
July sales				
\$400,000 × 25%	100,000			100,000
\$400,000 × 70%		280,000		280,000
\$400,000 × 3%			\$ 12,000	12,000
August sales				
\$600,000 × 25%		150,000		150,000
\$600,000 × 70%			420,000	420,000
September sales				
\$320,000 × 25%			<u>80,000</u>	<u>80,000</u>
Total cash collections.....	<u>\$317,500</u>	<u>\$439,000</u>	<u>\$512,000</u>	<u>\$1,268,500</u>

Problem 9-9 (continued)

2. Cash budget:

	<i>Month</i>			<i>Quarter</i>
	<i>July</i>	<i>August</i>	<i>September</i>	
Cash balance, beginning	\$ 44,500	\$ 28,000	\$ 23,000	\$ 44,500
Add receipts:				
Collections from customers.....	<u>317,500</u>	<u>439,000</u>	<u>512,000</u>	<u>1,268,500</u>
Total cash available.....	<u>362,000</u>	<u>467,000</u>	<u>535,000</u>	<u>1,313,000</u>
Less disbursements:				
Merchandise purchases ...	180,000	240,000	350,000	770,000
Salaries and wages	45,000	50,000	40,000	135,000
Advertising	130,000	145,000	80,000	355,000
Rent payments	9,000	9,000	9,000	27,000
Equipment purchases	<u>10,000</u>	<u>—</u>	<u>—</u>	<u>10,000</u>
Total disbursements.....	<u>374,000</u>	<u>444,000</u>	<u>479,000</u>	<u>1,297,000</u>
Excess (deficiency) of receipts over disbursements	<u>(12,000)</u>	<u>23,000</u>	<u>56,000</u>	<u>16,000</u>
Financing:				
Borrowings.....	40,000	—	—	40,000
Repayments	—	—	(40,000)	(40,000)
Interest.....	<u>—</u>	<u>—</u>	<u>(1,200)</u>	<u>(1,200)</u>
Total financing	<u>40,000</u>	<u>—</u>	<u>(41,200)</u>	<u>(1,200)</u>
Cash balance, ending.....	<u>\$ 28,000</u>	<u>\$ 23,000</u>	<u>\$ 14,800</u>	<u>\$ 14,800</u>

3. If the company needs a \$20,000 minimum cash balance to start each month, then the loan cannot be repaid in full by September 30. If the loan is repaid in full, the cash balance will drop to only \$14,800 on September 30, as shown above. Some portion of the loan balance will have to be carried over to October, at which time the cash inflow should be sufficient to complete repayment.

Problem 9-10 (45 minutes)

1. a. The reasons that Marge Atkins and Pete Granger use budgetary slack include the following:

- These employees are hedging against the unexpected (reducing uncertainty/risk).
- The use of budgetary slack allows employees to exceed expectations and/or show consistent performance. This is particularly important when performance is evaluated on the basis of actual results versus budget.
- Employees are able to blend personal and organizational goals through the use of budgetary slack as good performance generally leads to higher salaries, promotions, and bonuses.

b. The use of budgetary slack can adversely affect Atkins and Granger by:

- limiting the usefulness of the budget to motivate their employees to top performance.
- affecting their ability to identify trouble spots and take appropriate corrective action.
- reducing their credibility in the eyes of management.

Also, the use of budgetary slack may affect management decision-making as the budgets will show lower contribution margins (lower sales, higher expenses). Decisions regarding the profitability of product lines, staffing levels, incentives, etc., could have an adverse effect on Atkins' and Granger's departments.

Problem 9-10 (continued)

2. The use of budgetary slack, particularly if it has a detrimental effect on the company, may be unethical. In assessing the situation, the specific standards contained in "Standards of Ethical Conduct for Management Accountants" that should be considered are listed below.

Competence

Clear reports using relevant and reliable information should be prepared.

Confidentiality

The standards of confidentiality do not apply in this situation.

Integrity

- Any activity that subverts the legitimate goals of the company should be avoided.
- Favorable as well as unfavorable information should be communicated.

Objectivity

- Information should be fairly and objectively communicated.
- All relevant information should be disclosed.

(Unofficial CMA Solution)

Problem 9-11 (45 minutes)

	<i>July</i>	<i>August</i>	<i>Septem-ber</i>	<i>October</i>
1. Production budget:				
Budgeted sales (units).....	35,000	40,000	50,000	30,000
Add desired ending inventory...	<u>11,000</u>	<u>13,000</u>	<u>9,000</u>	<u>7,000</u>
Total needs.....	46,000	53,000	59,000	37,000
Less beginning inventory	<u>10,000</u>	<u>11,000</u>	<u>13,000</u>	<u>9,000</u>
Required production.....	<u>36,000</u>	<u>42,000</u>	<u>46,000</u>	<u>28,000</u>

2. During July and August the company is building inventories in anticipation of peak sales in September. Therefore, production exceeds sales during these months. In September and October inventories are being reduced in anticipation of a decrease in sales during the last months of the year. Therefore, production is less than sales during these months to cut back on inventory levels.

3. Raw direct materials budget:

	<i>July</i>	<i>August</i>	<i>Sep-tember</i>	<i>Third Quarter</i>
Required production (units)	36,000	42,000	46,000	124,000
Material H300 needed per unit.....	<u>× 3 cc</u>	<u>× 3 cc</u>	<u>× 3 cc</u>	<u>× 3 cc</u>
Production needs (cc)	108,000	126,000	138,000	372,000
Add desired ending inventory (cc).....	<u>63,000</u>	<u>69,000</u>	<u>42,000</u>	* <u>42,000</u>
Total material H300 needs	171,000	195,000	180,000	414,000
Less beginning inventory (cc)...	<u>54,000</u>	<u>63,000</u>	<u>69,000</u>	<u>54,000</u>
Material H300 purchases (cc)...	<u>117,000</u>	<u>132,000</u>	<u>111,000</u>	<u>360,000</u>

* 28,000 units (October production) × 3 cc per unit = 84,000 cc;
84,000 cc × 1/2 = 42,000 cc.

As shown in part (1), production is greatest in September; however, as shown in the raw direct materials budget, purchases of materials are greatest a month earlier—in August. The reason for the large purchases of materials in August is that the materials must be on hand to support the heavy production scheduled for September.

Problem 9-12 (30 minutes)

1.

Zan Corporation
Direct Materials Budget

	<i>1st Quarter</i>	<i>2nd Quarter</i>	<i>3rd Quarter</i>	<i>4th Quarter</i>	<i>Year</i>
Required production (units)	5,000	8,000	7,000	6,000	26,000
Raw materials per unit (grams)	<u>× 8</u>	<u>× 8</u>	<u>× 8</u>	<u>× 8</u>	<u>× 8</u>
Production needs (grams).....	40,000	64,000	56,000	48,000	208,000
Add desired ending inventory (grams)	<u>16,000</u>	<u>14,000</u>	<u>12,000</u>	<u>8,000</u>	<u>8,000</u>
Total needs (grams).....	56,000	78,000	68,000	56,000	216,000
Less beginning inventory (grams)....	<u>6,000</u>	<u>16,000</u>	<u>14,000</u>	<u>12,000</u>	<u>6,000</u>
Raw materials to be purchased (grams)	<u>50,000</u>	<u>62,000</u>	<u>54,000</u>	<u>44,000</u>	<u>210,000</u>
Cost of raw materials to be purchased at \$1.20 per gram	<u>\$60,000</u>	<u>\$74,400</u>	<u>\$64,800</u>	<u>\$52,800</u>	<u>\$252,000</u>

Schedule of Expected Cash Disbursements for Materials

Accounts payable, beginning balance	\$ 2,880				\$ 2,880
1st Quarter purchases	36,000	\$24,000			60,000
2nd Quarter purchases		44,640	\$29,760		74,400
3rd Quarter purchases.....			38,880	\$25,920	64,800
4th Quarter purchases.....				<u>31,680</u>	<u>31,680</u>
Total cash disbursements for materials	<u>\$38,880</u>	<u>\$68,640</u>	<u>\$68,640</u>	<u>\$57,600</u>	<u>\$233,760</u>

Problem 9-12 (continued)

2.

Zan Corporation
Direct Labor Budget

	<i>1st Quarter</i>	<i>2nd Quarter</i>	<i>3rd Quarter</i>	<i>4th Quarter</i>	<i>Year</i>
Required production (units)	5,000	8,000	7,000	6,000	26,000
Direct labor-hours per unit.....	<u>× 0.20</u>	<u>× 0.20</u>	<u>× 0.20</u>	<u>× 0.20</u>	<u>× 0.20</u>
Total direct labor-hours needed	1,000	1,600	1,400	1,200	5,200
Direct labor cost per hour	<u>× \$11.50</u>	<u>× \$11.50</u>	<u>× \$11.50</u>	<u>× \$11.50</u>	<u>× \$11.50</u>
Total direct labor cost.....	<u>\$ 11,500</u>	<u>\$ 18,400</u>	<u>\$ 16,100</u>	<u>\$ 13,800</u>	<u>\$ 59,800</u>

Problem 9-13 (30 minutes)

1.

Hruska Corporation
Direct Labor Budget

	<i>1st Quarter</i>	<i>2nd Quarter</i>	<i>3rd Quarter</i>	<i>4th Quarter</i>	<i>Year</i>
Units to be produced.....	12,000	10,000	13,000	14,000	49,000
Direct labor time per unit (hours)	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>
Total direct labor-hours needed	2,400	2,000	2,600	2,800	9,800
Direct labor cost per hour	<u>\$12.00</u>	<u>\$12.00</u>	<u>\$12.00</u>	<u>\$12.00</u>	<u>\$12.00</u>
Total direct labor cost.....	<u>\$28,800</u>	<u>\$24,000</u>	<u>\$31,200</u>	<u>\$33,600</u>	<u>\$117,600</u>

2.

Hruska Corporation
Manufacturing Overhead Budget

	<i>1st Quarter</i>	<i>2nd Quarter</i>	<i>3rd Quarter</i>	<i>4th Quarter</i>	<i>Year</i>
Budgeted direct labor-hours.....	2,400	2,000	2,600	2,800	9,800
Variable overhead rate	<u>\$1.75</u>	<u>\$1.75</u>	<u>\$1.75</u>	<u>\$1.75</u>	<u>\$1.75</u>
Variable manufacturing overhead	\$ 4,200	\$ 3,500	\$ 4,550	\$ 4,900	\$ 17,150
Fixed manufacturing overhead	<u>86,000</u>	<u>86,000</u>	<u>86,000</u>	<u>86,000</u>	<u>344,000</u>
Total manufacturing overhead	90,200	89,500	90,550	90,900	361,150
Less depreciation	<u>23,000</u>	<u>23,000</u>	<u>23,000</u>	<u>23,000</u>	<u>92,000</u>
Cash disbursements for manufacturing overhead	<u>\$67,200</u>	<u>\$66,500</u>	<u>\$67,550</u>	<u>\$67,900</u>	<u>\$269,150</u>

Problem 9-14 (30 minutes)

1. December cash sales.....	\$ 83,000
Collections on account:	
October sales: \$400,000 × 18%	72,000
November sales: \$525,000 × 60%.....	315,000
December sales: \$600,000 × 20%.....	<u>120,000</u>
Total cash collections	<u>\$590,000</u>
2. Payments to suppliers:	
November purchases (accounts payable).....	\$161,000
December purchases: \$280,000 × 30%	<u>84,000</u>
Total cash payments	<u>\$245,000</u>

3. **ASHTON COMPANY**
Cash Budget
For the Month of December

Cash balance, beginning	\$ 40,000
Add cash receipts: Collections from customers..	<u>590,000</u>
Total cash available before current financing	630,000
Less disbursements:	
Payments to suppliers for inventory.....	\$245,000
Selling and administrative expenses*	380,000
New web server	76,000
Dividends paid.....	<u>9,000</u>
Total disbursements	<u>710,000</u>
Excess (deficiency) of cash available over disbursements.....	<u>(80,000)</u>
Financing:	
Borrowings.....	100,000
Repayments	—
Interest	<u>—</u>
Total financing	<u>100,000</u>
Cash balance, ending	<u>\$ 20,000</u>

*\$430,000 – \$50,000 = \$380,000.

Problem 9-15 (60 minutes)

1. Schedule of cash receipts:

Cash sales—May	\$ 60,000
Collections on account receivable:	
April 30 balance.....	54,000
May sales (50% × \$140,000)	<u>70,000</u>
Total cash receipts	<u>\$184,000</u>

Schedule of cash payments for purchases:

April 30 accounts payable balance	\$ 63,000
May purchases (40% × \$120,000)	<u>48,000</u>
Total cash payments.....	<u>\$111,000</u>

MINDEN COMPANY
Cash Budget
For the Month of May

Cash balance, beginning	\$ 9,000
Add receipts from customers (above).....	<u>184,000</u>
Total cash available	<u>193,000</u>
Less disbursements:	
Purchase of inventory (above)	111,000
Operating expenses	72,000
Purchases of equipment.....	<u>6,500</u>
Total cash disbursements.....	<u>189,500</u>
Excess of receipts over disbursements	<u>3,500</u>
Financing:	
Borrowing—note.....	20,000
Repayments—note.....	(14,500)
Interest	<u>(100)</u>
Total financing	<u>5,400</u>
Cash balance, ending	<u>\$ 8,900</u>

Problem 9-15 (continued)

2.

MINDEN COMPANY
Budgeted Income Statement
For the Month of May

Sales.....	\$200,000
Cost of goods sold:	
Beginning inventory	\$ 30,000
Add purchases.....	<u>120,000</u>
Goods available for sale	150,000
Ending inventory	<u>40,000</u>
Cost of goods sold.....	<u>110,000</u>
Gross margin	90,000
Operating expenses (\$72,000 + \$2,000)	<u>74,000</u>
Net operating income	16,000
Interest expense	<u>100</u>
Net income.....	<u><u>\$ 15,900</u></u>

3.

MINDEN COMPANY
Budgeted Balance Sheet
May 31

<i>Assets</i>	
Cash	\$ 8,900
Accounts receivable (50% × \$140,000)	70,000
Inventory	40,000
Buildings and equipment, net of depreciation (\$207,000 + \$6,500 – \$2,000).....	<u>211,500</u>
Total assets	<u><u>\$330,400</u></u>
<i>Liabilities and Equity</i>	
Accounts payable (60% × 120,000).....	\$ 72,000
Note payable	20,000
Capital stock.....	180,000
Retained earnings (\$42,500 + \$15,900).....	<u>58,400</u>
Total liabilities and equity.....	<u><u>\$330,400</u></u>

Problem 9-16 (60 minutes)

1. Collections on sales:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Cash sales	\$120,000	\$180,000	\$100,000	\$ 400,000
Sales on account:				
February: \$200,000 × 80% × 20%.....	32,000			32,000
March: \$300,000 × 80% × 70%, 20%.....	168,000	48,000		216,000
April: \$600,000 × 80% × 10%, 70%, 20%.....	48,000	336,000	96,000	480,000
May: \$900,000 × 80% × 10%, 70%.....		72,000	504,000	576,000
June: \$500,000 × 80% × 10%			40,000	40,000
Total cash collections	<u>\$368,000</u>	<u>\$636,000</u>	<u>\$740,000</u>	<u>\$1,744,000</u>

2. a. Inventory purchases budget:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>
Budgeted cost of goods sold	\$420,000	\$630,000	\$350,000	\$280,000
Add desired ending inventory* .	<u>126,000</u>	<u>70,000</u>	<u>56,000</u>	
Total needs.....	546,000	700,000	406,000	
Less beginning inventory	<u>84,000</u>	<u>126,000</u>	<u>70,000</u>	
Required inventory purchases ..	<u>\$462,000</u>	<u>\$574,000</u>	<u>\$336,000</u>	

*20% of the next month's budgeted cost of goods sold.

b. Schedule of expected cash disbursements for inventory:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Accounts payable, March 31	\$126,000			\$ 126,000
April purchases.....	231,000	\$231,000		462,000
May purchases.....		287,000	\$287,000	574,000
June purchases.....			<u>168,000</u>	<u>168,000</u>
Total cash disbursements.....	<u>\$357,000</u>	<u>\$518,000</u>	<u>\$455,000</u>	<u>\$1,330,000</u>

Problem 9-16 (continued)

3.

GARDEN SALES, INC.
Cash Budget
For the Quarter Ended June 30

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Cash balance, beginning	\$ 52,000	\$ 40,000	\$ 40,000	\$ 52,000
Add collections from sales	<u>368,000</u>	<u>636,000</u>	<u>740,000</u>	<u>1,744,000</u>
Total cash available	<u>420,000</u>	<u>676,000</u>	<u>780,000</u>	<u>1,796,000</u>
Less disbursements:				
Purchases for inventory	357,000	518,000	455,000	1,330,000
Selling expenses	79,000	120,000	62,000	261,000
Administrative expenses	25,000	32,000	21,000	78,000
Land purchases	—	16,000	—	16,000
Dividends paid	<u>49,000</u>	<u>—</u>	<u>—</u>	<u>49,000</u>
Total disbursements	<u>510,000</u>	<u>686,000</u>	<u>538,000</u>	<u>1,734,000</u>
Excess (deficiency) of cash ..	<u>(90,000)</u>	<u>(10,000)</u>	<u>242,000</u>	<u>62,000</u>
Financing:				
Borrowings	130,000	50,000	—	180,000
Repayments	—	—	(180,000)	(180,000)
Interest*	<u>—</u>	<u>—</u>	<u>(4,900)</u>	<u>(4,900)</u>
Total financing	<u>130,000</u>	<u>50,000</u>	<u>(184,900)</u>	<u>(4,900)</u>
Cash balance, ending	<u>\$ 40,000</u>	<u>\$ 40,000</u>	<u>\$ 57,100</u>	<u>\$ 57,100</u>

* $\$130,000 \times 12\% \times 3/12 = \$3,900$

$\$ 50,000 \times 12\% \times 2/12 = \underline{1,000}$

\$4,900

Problem 9-17 (60 minutes)

1. The sales budget for the third quarter:

	<i>Month</i>			<i>Quarter</i>
	<i>July</i>	<i>August</i>	<i>September</i>	
Budgeted sales in units..	30,000	70,000	50,000	150,000
Selling price per unit	<u>× \$12</u>	<u>× \$12</u>	<u>× \$12</u>	<u>× \$12</u>
Budgeted sales	<u>\$360,000</u>	<u>\$840,000</u>	<u>\$600,000</u>	<u>\$1,800,000</u>

The schedule of expected cash collections from sales:

Accounts receivable, June 30:				
\$300,000 × 65%	\$195,000			\$ 195,000
July sales:				
\$360,000 × 30%, 65%	108,000	\$234,000		342,000
August sales:				
\$840,000 × 30%, 65%		252,000	\$546,000	798,000
September sales:				
\$600,000 × 30%			<u>180,000</u>	<u>180,000</u>
Total cash collections.....	<u>\$303,000</u>	<u>\$486,000</u>	<u>\$726,000</u>	<u>\$1,515,000</u>

2. The production budget for July-October:

	<i>July</i>	<i>August</i>	<i>September</i>	<i>October</i>
Budgeted sales in units.....	30,000	70,000	50,000	20,000
Add desired ending inventory .	<u>10,500</u>	<u>7,500</u>	<u>3,000</u>	<u>1,500</u>
Total needs.....	40,500	77,500	53,000	21,500
Less beginning inventory	<u>4,500</u>	<u>10,500</u>	<u>7,500</u>	<u>3,000</u>
Required production	<u>36,000</u>	<u>67,000</u>	<u>45,500</u>	<u>18,500</u>

Problem 9-17 (continued)

3. The direct materials budget for the third quarter:

	<i>Month</i>			<i>Quarter</i>
	<i>July</i>	<i>August</i>	<i>September</i>	
Required production (above).....	36,000	67,000	45,500	148,500
Raw material needs per unit (feet)	<u>× 4</u>	<u>× 4</u>	<u>× 4</u>	<u>× 4</u>
Production needs (feet) ..	144,000	268,000	182,000	594,000
Add desired ending inventory (feet)	<u>134,000</u>	<u>91,000</u>	<u>37,000</u> *	<u>37,000</u> *
Total needs (feet).....	278,000	359,000	219,000	631,000
Less beginning inventory (feet)	<u>72,000</u>	<u>134,000</u>	<u>91,000</u>	<u>72,000</u>
Raw materials to be purchased (feet).....	<u>206,000</u>	<u>225,000</u>	<u>128,000</u>	<u>559,000</u>
Cost of raw materials to be purchased at \$0.80 per foot	<u>\$164,800</u>	<u>\$180,000</u>	<u>\$102,400</u>	<u>\$447,200</u>

*18,500 units (October) × 4 feet per unit = 74,000 feet;
74,000 feet × ½ = 37,000 feet

The schedule of expected cash payments:

	<i>July</i>	<i>August</i>	<i>September</i>	<i>Quarter</i>
Accounts payable, June 30	\$ 76,000			\$ 76,000
July purchases:				
\$164,800 × 50%, 50% ...	82,400	\$ 82,400		164,800
August purchases:				
\$180,000 × 50%, 50% ...		90,000	\$ 90,000	180,000
September purchases:				
\$102,400 × 50%, 50% ...			<u>51,200</u>	<u>51,200</u>
Total cash payments.....	<u>\$158,400</u>	<u>\$172,400</u>	<u>\$141,200</u>	<u>\$472,000</u>

Problem 9-18 (60 minutes)

1. a. Schedule of expected cash collections:

	<i>Next Year's Quarter</i>				<i>Total</i>
	<i>First</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	
Current year—Fourth quarter sales:					
\$200,000 × 33%	\$ 66,000				\$ 66,000
Next year—First quarter sales:					
\$300,000 × 65%	195,000				195,000
\$300,000 × 33%		\$ 99,000			99,000
Next year—Second quarter sales:					
\$400,000 × 65%		260,000			260,000
\$400,000 × 33%			\$132,000		132,000
Next year—Third quarter sales:					
\$500,000 × 65%			325,000		325,000
\$500,000 × 33%				\$165,000	165,000
Next year—Fourth quarter sales:					
\$200,000 × 65%				130,000	130,000
Total cash collections.....	<u>\$261,000</u>	<u>\$359,000</u>	<u>\$457,000</u>	<u>\$295,000</u>	<u>\$1,372,000</u>

Problem 9-18 (continued)

b. Schedule of budgeted cash disbursements for merchandise purchases for next year:

	<i>Quarter</i>				<i>Total</i>
	<i>First</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	
Current year—Fourth quarter purchases:					
\$126,000 × 20%	\$ 25,200				\$ 25,200
Next year—First quarter purchases:					
\$186,000 × 80%	148,800				148,800
\$186,000 × 20%		\$ 37,200			37,200
Next year—Second quarter purchases:					
\$246,000 × 80%		196,800			196,800
\$246,000 × 20%			\$ 49,200		49,200
Next year—Third quarter purchases:					
\$305,000 × 80%			244,000		244,000
\$305,000 × 20%				\$ 61,000	61,000
Next year—Fourth quarter purchases:					
\$126,000 × 80%				100,800	100,800
Total cash payments.....	<u>\$174,000</u>	<u>\$234,000</u>	<u>\$293,200</u>	<u>\$161,800</u>	<u>\$863,000</u>

Problem 9-18 (continued)

2. Budgeted operating expenses for next year:

	<i>Quarter</i>				
	<i>First</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	<i>Year</i>
Budgeted sales	\$300,000	\$400,000	\$500,000	\$200,000	\$1,400,000
Variable expense rate	<u>× 15%</u>	<u>× 15%</u>	<u>× 15%</u>	<u>× 15%</u>	<u>× 15%</u>
Variable expenses	<u>45,000</u>	<u>60,000</u>	<u>75,000</u>	<u>30,000</u>	<u>210,000</u>
Fixed expenses	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>	<u>200,000</u>
Total expenses	95,000	110,000	125,000	80,000	410,000
Less depreciation	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>80,000</u>
Cash disbursements	<u>\$ 75,000</u>	<u>\$ 90,000</u>	<u>\$105,000</u>	<u>\$ 60,000</u>	<u>\$ 330,000</u>

Problem 9-18 (continued)

3. Cash budget for next year:

	<i>Quarter</i>				<i>Year</i>
	<i>First</i>	<i>Second</i>	<i>Third</i>	<i>Fourth</i>	
Cash balance, beginning	\$ 10,000	\$ 12,000	\$ 10,000	\$ 10,800	\$ 10,000
Add collections from sales	<u>261,000</u>	<u>359,000</u>	<u>457,000</u>	<u>295,000</u>	<u>1,372,000</u>
Total cash available	<u>271,000</u>	<u>371,000</u>	<u>467,000</u>	<u>305,800</u>	<u>1,382,000</u>
Less disbursements:					
Merchandise purchases	174,000	234,000	293,200	161,800	863,000
Operating expenses (above)	75,000	90,000	105,000	60,000	330,000
Dividends	10,000	10,000	10,000	10,000	40,000
Land	<u>—</u>	<u>75,000</u>	<u>48,000</u>	<u>—</u>	<u>123,000</u>
Total disbursements	<u>259,000</u>	<u>409,000</u>	<u>456,200</u>	<u>231,800</u>	<u>1,356,000</u>
Excess (deficiency) of receipts over disbursements	<u>12,000</u>	<u>(38,000)</u>	<u>10,800</u>	<u>74,000</u>	<u>26,000</u>
Financing:					
Borrowings	—	48,000	—	—	48,000
Repayments	—	—	—	(48,000)	(48,000)
Interest*	<u>—</u>	<u>—</u>	<u>—</u>	<u>(3,600)</u>	<u>(3,600)</u>
Total financing	<u>—</u>	<u>48,000</u>	<u>—</u>	<u>(51,600)</u>	<u>(3,600)</u>
Cash balance, ending	<u>\$ 12,000</u>	<u>\$ 10,000</u>	<u>\$ 10,800</u>	<u>\$ 22,400</u>	<u>\$ 22,400</u>

*\$48,000 × 10% × 9/12 = \$3,600

Problem 9-19 (120 minutes)

1. Schedule of expected cash collections:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Cash sales	\$36,000 *	\$43,200	\$54,000	\$133,200
Credit sales ¹	<u>20,000</u> *	<u>24,000</u>	<u>28,800</u>	<u>72,800</u>
Total collections	<u>\$56,000</u> *	<u>\$67,200</u>	<u>\$82,800</u>	<u>\$206,000</u>

¹40% of the preceding month's sales.

*Given.

2. Inventory purchases budget:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Budgeted cost of goods sold ¹	\$45,000 *	\$ 54,000 *	\$67,500	\$166,500
Add desired ending inventory ²	<u>43,200</u> *	<u>54,000</u>	<u>28,800</u>	<u>28,800</u>
Total needs	<u>88,200</u> *	<u>108,000</u>	<u>96,300</u>	<u>195,300</u>
Less beginning inventory ..	<u>36,000</u> *	<u>43,200</u>	<u>54,000</u>	<u>36,000</u>
Required purchases.....	<u>\$52,200</u> *	<u>\$ 64,800</u>	<u>\$42,300</u>	<u>\$159,300</u>

¹For April sales: \$60,000 sales × 75% cost ratio = \$45,000.

²At April 30: \$54,000 × 80% = \$43,200.

At June 30: July sales \$48,000 × 75% cost ratio × 80% = \$28,800.

*Given.

Schedule of Expected Cash Disbursements—Purchases

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
March purchases.....	\$21,750 *			\$ 21,750 *
April purchases	26,100 *	\$26,100 *		52,200 *
May purchases.....		32,400	\$32,400	64,800
June purchases.....			<u>21,150</u>	<u>21,150</u>
Total disbursements	<u>\$47,850</u> *	<u>\$58,500</u>	<u>\$53,550</u>	<u>\$159,900</u>

*Given.

Problem 9-19 (continued)

3. Schedule of Expected Cash Disbursements—Operating Expenses

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Commissions	\$ 7,200 *	\$ 8,640	\$10,800	\$26,640
Rent	2,500 *	2,500	2,500	7,500
Other expenses	<u>3,600 *</u>	<u>4,320</u>	<u>5,400</u>	<u>13,320</u>
Total disbursements	<u>\$13,300 *</u>	<u>\$15,460</u>	<u>\$18,700</u>	<u>\$47,460</u>

*Given.

4. Cash budget:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Cash balance, beginning	\$ 8,000 *	\$ 4,350	\$ 4,590	\$ 8,000
Add cash collections	<u>56,000 *</u>	<u>67,200</u>	<u>82,800</u>	<u>206,000</u>
Total cash available	<u>64,000 *</u>	<u>71,550</u>	<u>87,390</u>	<u>214,000</u>
Less disbursements:				
For inventory	47,850 *	58,500	53,550	159,900
For expenses	13,300 *	15,460	18,700	47,460
For equipment.....	<u>1,500 *</u>	<u>—</u>	<u>—</u>	<u>1,500</u>
Total disbursements	<u>62,650 *</u>	<u>73,960</u>	<u>72,250</u>	<u>208,860</u>
Excess (deficiency) of cash	<u>1,350 *</u>	<u>(2,410)</u>	<u>15,140</u>	<u>5,140</u>
Financing:				
Borrowings	3,000	7,000	—	10,000
Repayments.....	—	—	(10,000)	(10,000)
Interest	<u>—</u>	<u>—</u>	<u>(230)¹</u>	<u>(230)</u>
Total financing.....	<u>3,000</u>	<u>7,000</u>	<u>(10,230)</u>	<u>(230)</u>
Cash balance, ending	<u>\$ 4,350</u>	<u>\$ 4,590</u>	<u>\$ 4,910</u>	<u>\$ 4,910</u>

¹ \$3,000 × 12% × 3/12 = \$ 90

7,000 × 12% × 2/12 = 140

Total interest \$230

* Given.

Problem 9-19 (continued)

5.

SHILOW COMPANY
Income Statement
For the Quarter Ended June 30

Sales (\$60,000 + \$72,000 + \$90,000)		\$222,000
Less cost of goods sold:		
Beginning inventory (Given)	\$ 36,000	
Add purchases (Part 2)	<u>159,300</u>	
Goods available for sale	195,300	
Ending inventory (Part 2)	<u>28,800</u>	<u>166,500</u> *
Gross margin		55,500
Less operating expenses:		
Commissions (Part 3)	26,640	
Rent (Part 3)	7,500	
Depreciation (\$900 × 3)	2,700	
Other expenses (Part 3)	<u>13,320</u>	<u>50,160</u>
Net operating income		5,340
Less interest expense (Part 4)		<u>230</u>
Net income		<u>\$ 5,110</u>

*A simpler computation would be: $\$222,000 \times 75\% = \$166,500$.

Problem 9-19 (continued)

6.

SHILOW COMPANY
Balance Sheet
June 30

Assets

Current assets:	
Cash (Part 4).....	\$ 4,910
Accounts receivable (\$90,000 × 40%).....	36,000
Inventory (Part 2).....	<u>28,800</u>
Total current assets.....	69,710
Building and equipment—net	
(\$120,000 + \$1,500 – \$2,700).....	<u>118,800</u>
Total assets.....	<u>\$188,510</u>

Liabilities and Equity

Accounts payable (Part 2: \$42,300 × 50%)..	\$ 21,150
Stockholders' equity:	
Capital stock (Given).....	\$150,000
Retained earnings*	<u>17,360</u>
Total liabilities and equity.....	<u>\$188,510</u>
* Retained earnings, beginning.....	
Add net income	\$12,250
Retained earnings, ending	<u>5,110</u>
	<u>\$17,360</u>

Problem 9-20 (120 minutes)

1. Schedule of expected cash collections:

	<i>January</i>	<i>February</i>	<i>March</i>	<i>Quarter</i>
Cash sales	\$ 80,000 *	\$120,000	\$ 60,000	\$ 260,000
Credit sales.....	<u>224,000</u> *	<u>320,000</u>	<u>480,000</u>	<u>1,024,000</u>
Total cash collections.....	<u>\$304,000</u> *	<u>\$440,000</u>	<u>\$540,000</u>	<u>\$1,284,000</u>

*Given.

2. a. Inventory purchases budget:

	<i>January</i>	<i>February</i>	<i>March</i>	<i>Quarter</i>
Budgeted cost of goods sold ¹	\$240,000 *	\$360,000	\$180,000	\$780,000
Add desired ending inventory ²	<u>90,000</u> *	<u>45,000</u>	<u>30,000</u>	<u>30,000</u>
Total needs	330,000 *	405,000	210,000	810,000
Less beginning inventory	<u>60,000</u> *	<u>90,000</u>	<u>45,000</u>	<u>60,000</u>
Required purchases....	<u>\$270,000</u> *	<u>\$315,000</u>	<u>\$165,000</u>	<u>\$750,000</u>

¹For January sales: \$400,000 × 60% cost ratio = \$240,000.

²At January 31: \$360,000 × 25% = \$90,000. At March 31: \$200,000 April sales × 60% cost ratio × 25% = \$30,000.

*Given.

b. Schedule of cash disbursements for purchases:

	<i>January</i>	<i>February</i>	<i>March</i>	<i>Quarter</i>
December purchases.....	\$ 93,000 *			\$ 93,000 *
January purchases	135,000 *	\$135,000 *		270,000 *
February purchases...		157,500	\$157,500	315,000
March purchases.....			<u>82,500</u>	<u>82,500</u>
Total cash disbursements for purchases	<u>\$228,000</u> *	<u>\$292,500</u>	<u>\$240,000</u>	<u>\$760,500</u>

*Given.

Problem 9-20 (continued)

3. Schedule of cash disbursements for operating expenses:

	<i>January</i>	<i>February</i>	<i>March</i>	<i>Quarter</i>
Salaries and wages ...	\$ 27,000 *	\$ 27,000	\$ 27,000	\$ 81,000
Advertising	70,000 *	70,000	70,000	210,000
Shipping.....	20,000 *	30,000	15,000	65,000
Other expenses	<u>12,000 *</u>	<u>18,000</u>	<u>9,000</u>	<u>39,000</u>
Total cash dis- bursements for operating ex- penses	<u>\$129,000 *</u>	<u>\$145,000</u>	<u>\$121,000</u>	<u>\$395,000</u>

*Given.

4. Cash budget:

	<i>January</i>	<i>February</i>	<i>March</i>	<i>Quarter</i>
Cash balance, beginning.....	\$ 48,000 *	\$ 30,000	\$ 30,800	\$ 48,000
Add cash collections	<u>304,000 *</u>	<u>440,000</u>	<u>540,000</u>	<u>1,284,000</u>
Total cash available	<u>352,000 *</u>	<u>470,000</u>	<u>570,800</u>	<u>1,332,000</u>
Less disbursements:				
Inventory purchases....	228,000 *	292,500	240,000	760,500
Operating expenses	129,000 *	145,000	121,000	395,000
Equipment purchases..	—	1,700	84,500	86,200
Cash dividends	<u>45,000 *</u>	<u>—</u>	<u>—</u>	<u>45,000</u>
Total disbursements.....	<u>402,000 *</u>	<u>439,200</u>	<u>445,500</u>	<u>1,286,700</u>
Excess (deficiency) of cash	<u>(50,000)*</u>	<u>30,800</u>	<u>125,300</u>	<u>45,300</u>
Financing:				
Borrowings.....	80,000	—	—	80,000
Repayments	—	—	(80,000)	(80,000)
Interest ¹	<u>—</u>	<u>—</u>	<u>(2,400)</u>	<u>(2,400)</u>
Total financing	<u>80,000</u>	<u>—</u>	<u>(82,400)</u>	<u>(2,400)</u>
Cash balance, ending.....	<u>\$ 30,000</u>	<u>\$ 30,800</u>	<u>\$ 42,900</u>	<u>\$ 42,900</u>

*Given.

$$^1\$80,000 \times 12\% \times 3/12 = \$2,400.$$

Problem 9-20 (continued)

5. Income statement:

HILLYARD COMPANY
Income Statement
For the Quarter Ended March 31

Sales.....		\$1,300,000
Less cost of goods sold:		
Beginning inventory (Given)	\$ 60,000	
Add purchases (Part 2)	<u>750,000</u>	
Goods available for sale	810,000	
Ending inventory (Part 2)	<u>30,000</u>	<u>780,000</u> *
Gross margin		520,000
Less operating expenses:		
Salaries and wages (Part 3)	81,000	
Advertising (Part 3).....	210,000	
Shipping (Part 3)	65,000	
Depreciation (\$14,000 × 3)	42,000	
Other expenses (Part 3)	<u>39,000</u>	<u>437,000</u>
Net operating income		83,000
Less interest expense (Part 4)		<u>2,400</u>
Net income		<u>\$ 80,600</u>

*Given.

Problem 9-20 (continued)

6. Balance sheet:

HILLYARD COMPANY
Balance Sheet
March 31

Assets

Current assets:	
Cash (Part 4).....	\$ 42,900
Accounts receivable (80% × \$300,000).....	240,000
Inventory (Part 2).....	<u>30,000</u>
Total current assets.....	312,900
Buildings and equipment, net	
(\$370,000 + \$86,200 – \$42,000).....	<u>414,200</u>
Total assets.....	<u><u>\$727,100</u></u>

Liabilities and Equity

Current liabilities:	
Accounts payable (Part 2: 50% × \$165,000)....	\$ 82,500
Stockholders' equity:	
Capital stock	\$500,000
Retained earnings*	<u>144,600</u>
Total liabilities and equity.....	<u><u>\$727,100</u></u>

* Retained earnings, beginning.....	\$109,000
Add net income	<u>80,600</u>
Total	189,600
Deduct cash dividends.....	<u>45,000</u>
Retained earnings, ending	<u><u>\$144,600</u></u>

Problem 9-21 (60 minutes)

1. Collection pattern:

	<i>Percentage of Sales Uncollected at June 30*</i>	<i>Percentage to Be Collected in July</i>
a. March	1½%	1½%
b. April.....	6%	(b) – (a) = 4½%
c. May	20%	(c) – (b) = 14%
d. June	100%	(d) – (c) = 80%

*Given.

Schedule of expected cash collections:

From March sales (1½% × \$430,000)	\$ 6,450
From April sales (4½% × \$590,000)	26,550
From May sales (14% × \$640,000).....	89,600
From June sales (80% × \$720,000).....	<u>576,000</u>
Total	698,600
Less cash discounts (\$576,000 × 50% × 2½%)....	<u>7,200</u>
Net cash collections.....	<u><u>\$691,400</u></u>

2. a. Budgeted cash payments for raw materials purchases:

Accounts payable, June 30	\$172,000
July purchases: ½ (\$342,000 + \$18,000). ..	<u>180,000</u>
Total cash payments.....	<u><u>\$352,000</u></u>

b. Budgeted cash payments for overhead:

Indirect labor	\$36,000
Utilities	1,900
Payroll benefits:	
Company pension plan	
(\$7,000 – \$800)	\$ 6,200
Group insurance (6 × \$900).....	5,400
Unemployment insurance.....	1,300
Vacation pay.....	<u>14,100</u>
Total cash payments.....	<u><u>27,000</u></u>
	<u><u>\$64,900</u></u>

Problem 9-21 (continued)

3.

WALLACE PRODUCTS, LTD.
Cash Budget
July

Cash balance, beginning		\$ 78,000
Add collections from customers		<u>691,400</u>
Total cash available.....		769,400
Less disbursements:		
Raw material purchases (above)	\$352,000	
Direct labor	95,000	
Overhead (above)	64,900	
Advertising	110,000	
Sales salaries.....	50,000	
Administrative salaries.....	35,000	
Shipping.....	2,100	
Equipment purchases	<u>45,000</u>	<u>754,000</u>
Excess (deficiency) of cash.....		<u>15,400</u>
Financing:		
Borrowings		60,000
Repayments		—
Interest.....		<u>—</u>
Total financing		<u>60,000</u>
Cash balance, ending.....		<u><u>\$ 75,400</u></u>

4. The statement is incorrect. Even though the cash budget shows an overall excess of cash during the month, there is no assurance that shortages will not develop on a day-to-day basis *during* the month. For example, cash receipts may come later in the month than cash payments—resulting in temporary cash shortages. Unless cash receipts and payments occur uniformly over time, cash budgeting may need to be done on a weekly or daily basis. In addition, unexpected events can create a cash shortage.

Problem 9-22 (90 minutes)

1.	<i>July</i>	<i>August</i>	<i>September</i>	<i>Quarter</i>
Budgeted sales.....	5,000	6,000	7,000	18,000
Add desired ending inventory* ...	<u>4,800</u>	<u>5,600</u>	<u>6,000</u>	<u>6,000</u>
Total needs	9,800	11,600	13,000	24,000
Less beginning inventory.....	<u>4,000</u>	<u>4,800</u>	<u>5,600</u>	<u>4,000</u>
Required production	<u>5,800</u>	<u>6,800</u>	<u>7,400</u>	<u>20,000</u>

*80% of the next month's sales.

2. Material #101:

	<i>July</i>	<i>August</i>	<i>September</i>	<i>Quarter</i>
Required production (units) ...	5,800	6,800	7,400	20,000
Material #101 per unit (ounces).....	<u>× 6</u>	<u>× 6</u>	<u>× 6</u>	<u>× 6</u>
Production needs (ounces)	34,800	40,800	44,400	120,000
Add desired ending inven- tory (ounces)	<u>20,400</u>	<u>22,200</u>	<u>23,700</u> *	<u>23,700</u>
Total needs (ounces).....	55,200	63,000	68,100	143,700
Less beginning inventory (ounces).....	<u>35,000</u>	<u>20,400</u>	<u>22,200</u>	<u>35,000</u>
Raw materials to be pur- chased (ounces).....	<u>20,200</u>	<u>42,600</u>	<u>45,900</u>	<u>108,700</u>
Cost of raw materials to be purchased at \$2.40 per ounce	<u>\$48,480</u>	<u>\$102,240</u>	<u>\$110,160</u>	<u>\$260,880</u>

* October production: $7,500 + 6,400 - 6,000 = 7,900$ units.
 $7,900$ units \times 6 ounces per unit = 47,400 ounces;
 $47,400$ ounces \times 0.5 = 23,700 ounces

Problem 9-22 (continued)

Material #211:

	<i>July</i>	<i>August</i>	<i>September</i>	<i>Quarter</i>
Required production (units)	5,800	6,800	7,400	20,000
Material #211 per unit (pounds).....	<u>× 4</u>	<u>× 4</u>	<u>× 4</u>	<u>× 4</u>
Production needs (pounds).....	23,200	27,200	29,600	80,000
Add desired ending inven- tory (pounds).....	<u>13,600</u>	<u>14,800</u>	<u>15,800</u> *	<u>15,800</u>
Total needs (pounds).....	36,800	42,000	45,400	95,800
Less beginning inventory (pounds).....	<u>30,000</u>	<u>13,600</u>	<u>14,800</u>	<u>30,000</u>
Raw materials to be purchased (pounds).....	<u>6,800</u>	<u>28,400</u>	<u>30,600</u>	<u>65,800</u>
Cost of raw material to be purchased at \$5 per pound.....	<u>\$34,000</u>	<u>\$142,000</u>	<u>\$153,000</u>	<u>\$329,000</u>

* October production: $7,500 + 6,400 - 6,000 = 7,900$ units.
 $7,900 \text{ units} \times 4 \text{ pounds per unit} = 31,600 \text{ pounds};$
 $31,600 \text{ pounds} \times 0.5 = 15,800 \text{ pounds}$

3. Direct labor budget:

		<i>Direct Labor</i>			
		<i>Hours</i>			
	<i>Units</i>	<i>Per</i>	<i>Total</i>	<i>Cost per</i>	<i>Total Cost</i>
	<i>Produced</i>	<i>Unit</i>		<i>DLH</i>	
Forming.....	20,000	0.40	8,000	\$16.00	\$128,000
Assembly.....	20,000	1.00	20,000	\$11.00	220,000
Finishing.....	20,000	0.10	<u>2,000</u>	\$15.00	<u>30,000</u>
Total			<u>30,000</u>		<u>\$378,000</u>

Problem 9-22 (continued)

4. Manufacturing overhead budget:

Expected production for the year (units)	65,000
Actual production through June 30 (units).....	<u>27,000</u>
Expected production, July through December (units) ...	38,000
Variable manufacturing overhead rate per unit (\$148,500 ÷ 27,000 units)	<u>× \$5.50</u>
Variable manufacturing overhead	\$209,000
Fixed manufacturing overhead (\$186,000 ÷ 2).....	<u>93,000</u>
Total manufacturing overhead	302,000
Less depreciation (\$86,400 ÷ 2).....	<u>43,200</u>
Cash disbursements for manufacturing overhead	<u>\$258,800</u>

Case 9-23 (45 minutes)

1. The budgetary control system has several important shortcomings that reduce its effectiveness and may cause it to interfere with good performance. Some of the shortcomings are itemized and explained below.
 - a. *Lack of Coordinated Goals.* Emory had been led to believe high quality output is the goal; it now appears low cost is the goal. Employees do not know what the goals are and thus cannot make decisions that further the goals.
 - b. *Influence of Uncontrollable Factors.* Actual performance relative to budget is greatly influenced by uncontrollable factors (i.e., rush orders, lack of prompt maintenance). Thus, the variance reports serve little purpose for performance evaluation or for locating controllable factors to improve performance. As a result, the system does not encourage coordination among departments.
 - c. *The Short-Run Perspectives.* Monthly evaluations and budget tightening on a monthly basis results in a very short-run perspective. This results in inappropriate decisions (i.e., inspect forklift trucks rather than repair inoperative equipment, fail to report supplies usage).
 - d. *System Does Not Motivate.* The budgetary system appears to focus on performance evaluation even though most of the essential factors for that purpose are missing. The focus on evaluation and the weaknesses take away an important benefit of the budgetary system—employee motivation.
2. The improvements in the budgetary control system should correct the deficiencies described above. The system should:
 - a. more clearly define the company's objectives.
 - b. develop an accounting reporting system that better matches controllable factors with supervisor responsibility and authority.
 - c. establish budgets for appropriate time periods that do not change monthly simply as a result of a change in the prior month's performance.

The entire company from top management down should be educated in sound budgetary procedures.

(Unofficial CMA Solution, adapted)

Case 9-24 (120 minutes or longer)

1. a. Sales budget:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Budgeted unit sales	65,000	100,000	50,000	215,000
Selling price per unit	<u>× \$10</u>	<u>× \$10</u>	<u>× \$10</u>	<u>× \$10</u>
Total sales	<u>\$650,000</u>	<u>\$1,000,000</u>	<u>\$500,000</u>	<u>\$2,150,000</u>

b. Schedule of expected cash collections:

February sales (10%)... \$ 26,000				\$ 26,000
March sales				
(70%, 10%)	280,000	\$ 40,000		320,000
April sales				
(20%, 70%, 10%)	130,000	455,000	\$ 65,000	650,000
May sales				
(20%, 70%)		200,000	700,000	900,000
June sales (20%)			<u>100,000</u>	<u>100,000</u>
Total cash collections ...	<u>\$436,000</u>	<u>\$695,000</u>	<u>\$865,000</u>	<u>\$1,996,000</u>

c. Budgeted merchandise purchases:

Budgeted unit sales	65,000	100,000	50,000	215,000
Add desired ending				
inventory*	<u>40,000</u>	<u>20,000</u>	<u>12,000</u>	<u>12,000</u>
Total needs	105,000	120,000	62,000	227,000
Less beginning inven-				
tory	<u>26,000</u>	<u>40,000</u>	<u>20,000</u>	<u>26,000</u>
Required purchases	<u>79,000</u>	<u>80,000</u>	<u>42,000</u>	<u>201,000</u>
Cost of purchases at				
\$4 per unit	<u>\$316,000</u>	<u>\$320,000</u>	<u>\$168,000</u>	<u>\$ 804,000</u>

*40% of the next month's unit sales.

d. Expected cash payments for merchandise purchases:

Accounts payable	\$100,000			\$ 100,000
April purchases	158,000	\$158,000		316,000
May purchases		160,000	\$160,000	320,000
June purchases			<u>84,000</u>	<u>84,000</u>
Total cash payments	<u>\$258,000</u>	<u>\$318,000</u>	<u>\$244,000</u>	<u>\$ 820,000</u>

Case 9-24 (continued)

2.

EARRINGS UNLIMITED
Cash Budget
For the Three Months Ending June 30

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Cash balance	\$ 74,000	\$ 50,000	\$ 50,000	\$ 74,000
Add collections from customers	<u>436,000</u>	<u>695,000</u>	<u>865,000</u>	<u>1,996,000</u>
Total cash available	<u>510,000</u>	<u>745,000</u>	<u>915,000</u>	<u>2,070,000</u>
Less disbursements:				
Merchandise pur- chases.....	258,000	318,000	244,000	820,000
Advertising	200,000	200,000	200,000	600,000
Rent	18,000	18,000	18,000	54,000
Salaries.....	106,000	106,000	106,000	318,000
Commissions (4% of sales)	26,000	40,000	20,000	86,000
Utilities	7,000	7,000	7,000	21,000
Equipment purchases...	—	16,000	40,000	56,000
Dividends paid.....	<u>15,000</u>	<u>—</u>	<u>—</u>	<u>15,000</u>
Total disbursements.....	<u>630,000</u>	<u>705,000</u>	<u>635,000</u>	<u>1,970,000</u>
Excess (deficiency) of receipts over dis- bursements	<u>(120,000)</u>	<u>40,000</u>	<u>280,000</u>	<u>100,000</u>
Financing:				
Borrowings.....	170,000	10,000	—	180,000
Repayments	—	—	(180,000)	(180,000)
Interest.....	<u>—</u>	<u>—</u>	<u>(5,300)*</u>	<u>(5,300)</u>
Total financing	<u>170,000</u>	<u>10,000</u>	<u>(185,300)</u>	<u>(5,300)</u>
Cash balance, ending.....	<u>\$ 50,000</u>	<u>\$ 50,000</u>	<u>\$ 94,700</u>	<u>\$ 94,700</u>

* $\$170,000 \times 12\% \times 3/12 \dots \$5,100$
 $\$ 10,000 \times 12\% \times 2/12 \dots \underline{200}$
 Total interest \$5,300

Case 9-24 (continued)

3.

EARRINGS UNLIMITED
Budgeted Income Statement
For the Three Months Ended June 30

Sales revenue (Part 1 a.)		\$2,150,000
Less variable expenses:		
Cost of goods sold @ \$4 per unit.....	\$860,000	
Commissions @ 4% of sales.....	<u>86,000</u>	<u>946,000</u>
Contribution margin		1,204,000
Less fixed expenses:		
Advertising (\$200,000 × 3)	600,000	
Rent (\$18,000 × 3)	54,000	
Salaries (\$106,000 × 3)	318,000	
Utilities (\$7,000 × 3).....	21,000	
Insurance (\$3,000 × 3).....	9,000	
Depreciation (\$14,000 × 3)	<u>42,000</u>	<u>1,044,000</u>
Net operating income		160,000
Less interest expense (Part 2).....		<u>5,300</u>
Net income.....		<u>\$ 154,700</u>

Case 9-24 (continued)

4. EARRINGS UNLIMITED
Budgeted Balance Sheet
June 30

<i>Assets</i>	
Cash	\$ 94,700
Accounts receivable (see below)	500,000
Inventory (12,000 units @ \$4 per unit).....	48,000
Prepaid insurance (\$21,000 – \$9,000)	12,000
Property and equipment, net (\$950,000 + \$56,000 – \$42,000).....	<u>964,000</u>
Total assets	<u>\$1,618,700</u>

<i>Liabilities and Stockholders' Equity</i>	
Accounts payable, purchases (50% × \$168,000)	\$ 84,000
Dividends payable	15,000
Capital stock.....	800,000
Retained earnings (see below)	<u>719,700</u>
Total liabilities and stockholders' equity.....	<u>\$1,618,700</u>

Accounts receivable at June 30:

10% × May sales of \$1,000,000.....	\$100,000
80% × June sales of \$500,000.....	<u>400,000</u>
Total	<u>\$500,000</u>

Retained earnings at June 30:

Balance, March 31	\$580,000
Add net income (part 3)	<u>154,700</u>
Total	734,700
Less dividends declared	<u>15,000</u>
Balance, June 30	<u>\$719,700</u>

Case 9-25 (75 minutes)

1. Before a cash budget can be prepared, the following supporting computations must be made:

Cash payments for crossbow purchases:

	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>
Budgeted sales	\$2,000,000	\$1,800,000	\$2,200,000	\$2,500,000	\$2,800,000	\$3,000,000
Cost of crossbows (50%)....	1,000,000	900,000	1,100,000	1,250,000	1,400,000	1,500,000
Crossbow purchases:						
For next month's sales* ...	540,000	660,000	750,000	840,000	900,000	
For this month's sales** ...	<u>400,000</u>	<u>360,000</u>	<u>440,000</u>	<u>500,000</u>	<u>560,000</u>	
Total cost of purchases	<u>\$ 940,000</u>	<u>\$1,020,000</u>	<u>\$1,190,000</u>	<u>\$1,340,000</u>	<u>\$1,460,000</u>	
Payments for purchases:						
February purchases:						
940,000 × 20%			\$ 188,000			
March purchases:						
1,020,000 × 80%,						
20%			816,000	\$ 204,000		
April purchases:						
1,190,000 × 80%,						
20%				952,000	\$ 238,000	
May purchases:						
1,340,000 × 80%					<u>1,072,000</u>	
Total cash payments.....			<u>\$1,004,000</u>	<u>\$1,156,000</u>	<u>\$1,310,000</u>	

* 60% of next month's sales.

** 40% of this month's sales.

Case 9-25 (continued)

General and administrative expenses:

	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>
Salaries (1/12 of annual)			\$ 40,000	\$ 40,000	\$ 40,000	
Promotion (1/12 of annual).....			55,000	55,000	55,000	
Property taxes (1/4 of annual) ..			—	—	60,000	
Insurance (1/12 of annual)			30,000	30,000	30,000	
Utilities (1/12 of annual).....			25,000	25,000	25,000	
Depreciation (non-cash item)			—	—	—	
Total cash payments.....			<u>\$150,000</u>	<u>\$150,000</u>	<u>\$210,000</u>	

Income tax expense:

Note that \$612,000 is the company's net income; the income before tax would be: $\$612,000 \div 0.60 = \$1,020,000$. Thus, the income tax would be: $\$1,020,000 \times 0.40 = \$408,000$.

Cash receipts from sales:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
February sales: $\$2,000,000 \times 40\%$	\$ 800,000			\$ 800,000
March sales: $\$1,800,000 \times 60\%, 40\%$	1,080,000	\$ 720,000		1,800,000
April sales: $\$2,200,000 \times 60\%, 40\%$		1,320,000	\$ 880,000	2,200,000
May sales: $\$2,500,000 \times 60\%$			<u>1,500,000</u>	<u>1,500,000</u>
Total cash receipts	<u>\$1,880,000</u>	<u>\$2,040,000</u>	<u>\$2,380,000</u>	<u>\$6,300,000</u>

Case 9-25 (continued)

Given the above data, the cash budget can be prepared as follows:

	<i>April</i>	<i>May</i>	<i>June</i>	<i>Quarter</i>
Cash balance, beginning	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Add cash receipts.....	<u>1,880,000</u>	<u>2,040,000</u>	<u>2,380,000</u>	<u>6,300,000</u>
Total cash available	<u>1,980,000</u>	<u>2,140,000</u>	<u>2,480,000</u>	<u>6,400,000</u>
Less cash disbursements:				
Crossbow purchases	1,004,000	1,156,000	1,310,000	3,470,000
Wages (20% of sales).....	440,000	500,000	560,000	1,500,000
General and administrative	150,000	150,000	210,000	510,000
Income taxes	408,000	—	—	408,000
Equipment and facilities	<u>28,000</u>	<u>324,000</u>	<u>—</u>	<u>352,000</u>
Total disbursements	<u>2,030,000</u>	<u>2,130,000</u>	<u>2,080,000</u>	<u>6,240,000</u>
Excess (deficiency) of cash available over disbursements.....	<u>(50,000)</u>	<u>10,000</u>	<u>400,000</u>	<u>160,000</u>
Financing:				
Borrowings	150,000	90,000	—	240,000
Repayments	—	—	(240,000)	(240,000)
Interest	—	—	(8,000)	(8,000)
Invested funds	<u>—</u>	<u>—</u>	<u>(52,000)</u>	<u>(52,000)</u>
Total financing	<u>150,000</u>	<u>90,000</u>	<u>(300,000)</u>	<u>(60,000)</u>
Cash balance, ending	<u>\$ 100,000</u>	<u>\$ 100,000</u>	<u>\$ 100,000</u>	<u>\$ 100,000</u>

Case 9-25 (continued)

2. Cash budgeting is particularly important for a rapidly expanding company such as CrossMan Corporation because as sales grow rapidly, so do expenditures. These expenditures generally precede cash receipts, often by a considerable amount of time, and a growing company must be prepared to finance this increasing gap between expenditures and receipts. Thus, cash budgeting is essential because it will forewarn managers of impending cash problems. And, if it becomes necessary to arrange for financing, a cash budget will often be required by lenders.

Group Exercise 9-26

1. Across-the-board cuts may be politically palatable and may be perceived as fair by many, but they are indiscriminate. Cuts are taken out of programs without regard to their importance to the university and students.
2. When determining which programs should receive greater or smaller reductions in their budgets, administrators must make judgments about which programs can be cut with the least harm to central purposes of the university.
3. If cuts are likely to continue, administrators should be particularly vigilant to monitor the quality and effectiveness of programs and to closely watch how well programs use financial resources.
4. To increase understanding and cooperation, the decision-making process should be participative. Those who will be affected by the decisions should have some say in the decision-making.
5. By allowing individuals to participate in the budgeting process and by attempting to build consensus, the animosity that may be felt by those affected by cuts may be reduced. However, this is a two-edged sword. Allowing lower-level administrators to participate in the decision-making may invite turf-protecting tactics. Moreover, it may be impossible to build consensus because of resistance to change. These are not easy problems to deal with.