b. The company normally collects 65% of a quarter's sales before the quarter ends and another 33% in the following quarter. The remainder is uncollectible. This pattern of collections is now being experienced in the current year's fourth-quarter actual data.
c. Eighty percent of a quarter's merchandise purchases are paid for within the quarter. The remainder is paid for in the following quarter.
d. Operating expenses for next year are budgeted at $50,000 per quarter plus 15% of sales. Of the fixed amount, $20,000 each quarter is depreciation.
e. The company will pay $10,000 in dividends each quarter.
f. Equipment purchases of $75,000 will be made in the second quarter, and purchases of $48,000 will be made in the third quarter. These purchases will be for cash.
g. The Cash account contained $10,000 at the end of the current year. The treasurer feels that this represents a minimum balance that must be maintained.
h. Any borrowing will take place at the beginning of a quarter, and any repayments will be made at the end of a quarter at an annual interest rate of 10%. Interest is paid only when principal is repaid. All borrowings and all repayments of principal must be in round $1,000 amounts. Interest payments can be in any amount. (Compute interest on whole months, e.g., $\frac{1}{12}$, $\frac{2}{12}$.)
i. At present, the company has no loans outstanding.

Required:

1. Prepare the following by quarter and in total for next year:
   a. A schedule of expected cash collections.
   b. A schedule of expected cash disbursements for merchandise purchases.
2. Compute the expected cash disbursements for operating expenses, by quarter and in total, for next year.
3. Prepare a cash budget, by quarter and in total, for next year. Show clearly in your budget the quarter(s) in which borrowing will be necessary and the quarter(s) in which repayments can be made, as requested by the company's bank.

PROBLEM 9–19 Completing a Master Budget [LO2, LO4, LO7, LO8, LO9, LO10]

The following data relate to the operations of Shilow Company, a wholesale distributor of consumer goods:

Current assets as of March 31:	
Cash	$8,000
Accounts receivable	$20,000
Inventory	$36,000
Building and equipment, net	$120,000
Accounts payable	$21,750
Capital stock	$150,000
Retained earnings	$12,250

a. The gross margin is 25% of sales.
b. Actual and budgeted sales data:

March (actual)	$50,000
April	$60,000
May	$72,000
June	$90,000
July	$48,000

c. Sales are 60% for cash and 40% on credit. Credit sales are collected in the month following sale. The accounts receivable at March 31 are a result of March credit sales.
d. Each month's ending inventory should equal 80% of the following month's budgeted cost of goods sold.
e. One-half of a month's inventory purchases is paid for in the month of purchase; the other half is paid for in the following month. The accounts payable at March 31 are the result of March purchases of inventory.
f. Monthly expenses are as follows: commissions, 12% of sales; rent, $2,500 per month; other expenses (excluding depreciation), 6% of sales. Assume that these expenses are paid monthly. Depreciation is $900 per month (includes depreciation on new assets).

Equipment costing $1,500 will be purchased for cash in April.

h. The company must maintain a minimum cash balance of $4,000. An open line of credit is available at a local bank. All borrowing is done at the beginning of a month, and all repayments are made at the end of a month; borrowing must be in multiples of $1,000. The annual interest rate is 12%. Interest is paid only at the time of repayment of principal; figure interest on whole months (1/12, 2/12, and so forth).

Required:

Using the preceding data:

1. Complete the following schedule:

Schedule of Expected Cash Collections

	April	May	June	Quarter
Cash sales	$36,000			
Credit sales	20,000			
Total collections	$56,000			

2. Complete the following:

Merchandise Purchases Budget

	April	May	June	Quarter
Budgeted cost of goods sold	$45,000*	$54,000		
Add desired ending inventory	43,200†			
Total needs	88,200			
Less beginning inventory	36,000			
Required purchases	$52,200			

*For April sales: $60,000 sales × 75% cost ratio = $45,000.
†$54,000 × 80% = $43,200

Schedule of Expected Cash Disbursements—Merchandise Purchases

	April	May	June	Quarter
March purchases	$21,750			$21,750
April purchases	26,100	$26,100		52,200
May purchases				
June purchases				
Total disbursements	$47,850			

3. Complete the following:

Schedule of Expected Cash Disbursements—Operating Expenses

	April	May	June	Quarter
Commissions	$ 7,200			
Rent	2,500			
Other expenses	3,600			
Total disbursements	$13,300			

4. Complete the following cash budget:

Cash Budget

	April	May	June	Quarter
Cash balance, beginning	$ 8,000			
Add cash collections	56,000			
Total cash available	64,000			

continued

	April	May	June	Quarter
Less cash disbursements:				
For inventory	47,850			
For expenses	13,300			
For equipment	1,500			
Total cash disbursements	62,650			
Excess (deficiency) of cash	1,350			
Financing:				
Etc.				

5. Prepare an absorption costing income statement, similar to the one shown in Schedule 9 in the text, for the quarter ended June 30.
6. Prepare a balance sheet as of June 30.

PROBLEM 9–20 Completing a Master Budget [LO2, LO4, LO7, LO8, LO9, LO10]

Hillyard Company, an office supplies specialty store, prepares its master budget on a quarterly basis. The following data have been assembled to assist in preparing the master budget for the first quarter:

a. As of December 31 (the end of the prior quarter), the company's general ledger showed the following account balances:

	Debits	Credits
Cash	$ 48,000	
Accounts Receivable	224,000	
Inventory	60,000	
Buildings and Equipment (net)	370,000	
Accounts Payable		$ 93,000
Capital Stock		500,000
Retained Earnings		109,000
	$702,000	$702,000

b. Actual sales for December and budgeted sales for the next four months are as follows:

December (actual)	$280,000
January	$400,000
February	$600,000
March	$300,000
April	$200,000

c. Sales are 20% for cash and 80% on credit. All payments on credit sales are collected in the month following sale. The accounts receivable at December 31 are a result of December credit sales.

d. The company's gross margin is 40% of sales. (In other words, cost of goods sold is 60% of sales.)

e. Monthly expenses are budgeted as follows: salaries and wages, $27,000 per month: advertising, $70,000 per month; shipping, 5% of sales; other expenses, 3% of sales. Depreciation, including depreciation on new assets acquired during the quarter, will be $42,000 for the quarter.

Each month's ending inventory should equal 25% of the following month's cost of goods sold.

One-half of a month's inventory purchases is paid for in the month of purchase; the other half is paid in the following month.

During February, the company will purchase a new copy machine for $1,700 cash. During March, other equipment will be purchased for cash at a cost of $84,500.

During January, the company will declare and pay $45,000 in cash dividends.

The company must maintain a minimum cash balance of $30,000. An open line of credit is available at a local bank for any borrowing that may be needed during the quarter. All borrowing is done at the beginning of a month, and all repayments are made at the end of a month. Borrowings and repayments of principal must be in multiples of $1,000. Interest is paid only at the time of payment of principal. The annual interest rate is 12%. (Figure interest on whole months, e.g., $\frac{1}{12}$, $\frac{2}{12}$.)