

CVP ANALYSIS Peter Farrow is considering opening a franchise CD store in a new shopping mall that has just been completed. Based on historical data from other franchise stores and a careful market study, he is confident that the store can achieve monthly sales of \$180,000. Variable costs (excluding rent) will be approximately 70 percent of sales dollars. Rent payable to the mall owners will be 7 percent of sales or \$11,000, whichever is higher. Initial cost of the franchise is \$25,000, paid for in one lump sum. Monthly fixed costs, totaling \$33,000, consist of

Installment loan for leasehold improvements	\$ 800
Salaried employees (4 at \$2,750)	11,000
Owner's salary	15,000
Franchise fee	4,000
Insurance, property taxes, etc.	<u>2,200</u>
Total fixed costs	<u><u>\$33,000</u></u>

Peter is aware that a department store with a large discount CD department is also considering moving into the mall directly opposite the location he is considering. He knows that he will select his merchandise carefully and will offer top-notch customer service, but a new store would take some of his business. If the department store moves in, he calculates that his sales would decline by at least 10 but not more than 18 percent. A decline of even 10 percent would require him to reduce the cost of salaried employees to \$10,000 by replacing one full-time employee with part-time help. Peter considers a 15 percent minimum annual return on his initial investment in the franchise as the minimal return necessary to justify opening the store.

Required

1. Determine the sales volume per month necessary to achieve the desired return, assuming that the competing department store does *not* rent space in the mall.
2. Determine the breakeven sales volume, assuming that the competing department store does move into the mall and sales are reduced by (a) 10 percent and (b) 18 percent.
3. Should Peter open the store? What additional analysis should he undertake?
4. Assume a sales volume decrease of 18 percent. How far below \$32,000 would Peter have to reduce fixed costs to break even? Is it likely that he would be able to do this?

TRADITIONAL COSTING VS. ABC The controller for California Cooking Oil Company has established these overhead cost pools and cost drivers:

Overhead Cost Pool	Budgeted Overhead	Cost Driver	Estimated Cost Driver Level
Machine setups	\$100,000	Number of setups	\$ 100
Materials handling	80,000	Number of barrels	8,000
Quality control	200,000	Number of inspections	1,000
Other overhead cost	100,000	Machine-hours	10,000
Total	<u>\$480,000</u>		

An order of 500 barrels of cooking oil has used

Machine setups	6 setups
Materials handling	500 barrels
Quality inspections	20 times
Machine-hours	1,000 hours

Required

1. If California uses a single cost driver system based on machine-hours, how much total overhead is applied to an order of 500 barrels?
2. How much overhead is assigned to each barrel of cooking oil under the single cost driver system?
3. If California uses a multiple cost driver system based on total overhead cost, will the total overhead applied for 500 barrels be the same as in requirement 1? If not, compute the total overhead cost under a multiple cost driver system.
4. How big is the difference in the overhead cost per barrel under the single cost driver system and a multiple cost driver system?

COMPREHENSIVE PROFIT PLAN Palms Manufacturing Company makes two basic products known as cee and dee. Data assembled by the managers follow:

	Cee	Dee	
Requirements for finished unit			
Raw material 1	10 pounds	8 pounds	
Raw material 2	0	4 pounds	
Raw material 3	2 pounds	1 pound	
Direct labor	5 hours	8 hours	
Product information			
Sales price	\$150	\$220	
Sales unit	12,000	9,000	
Estimated beginning inventory	400	150	
Desired ending inventory	300	200	
<i>Raw Materials</i>			
	1	2	3
Cost	\$2.00	\$2.50	\$0.50
Estimated beginning inventory in pounds	3,000	1,500	1,000
Desired ending inventory in pounds	4,000	1,000	1,500

The direct labor wage rate is \$10 per hour, overhead is applied on the basis of direct labor-hours. The income tax rate of the firm is 40 percent. The beginning inventory of finished products has the same cost per unit as the ending inventory; the work-in-process inventory is negligible.

Factory Overhead Information

Indirect materials	\$ 10,000
Miscellaneous supplies and tools	5,000
Indirect labor	40,000
Supervision—fixed	80,000
Payroll taxes and fringe benefits	75,000
Maintenance costs—fixed	20,000
Maintenance costs—variable	10,000
Depreciation	70,000
Heat, light, and power—fixed	8,710
Heat, light, and power—variable	5,090
Total	<u>\$323,800</u>

Selling and Administrative Expense Information

Advertising	\$ 60,000
Sales salaries	200,000
Travel and entertainment	60,000
Depreciation—warehouse	5,000
Office salaries	60,000
Executive salaries	250,000
Supplies	4,000
Depreciation—office	6,000
Total	<u>\$645,000</u>

Required Prepare the following:

1. Sales budget.
2. Production budget.
3. Raw materials purchase budget.

4. Direct labor budget.
5. Factory overhead budget.
6. Cost of goods sold budget with schedule of ending inventory.
7. Selling and general administrative expense budget.
8. Budget income statement.