eXcel

PROBLEM 5–21 Basic CVP Analysis [LO1, LO3, LO4, LO6, LO8]
Stratford Company distributes a lightweight lawn chair that sells for $15 per unit. Variable expenses are $6 per unit, and fixed expenses total $180,000 annually.

Required:

Answer the following independent questions:

1. What is the product's CM ratio?
2. Use the CM ratio to determine the break-even point in sales dollars.
3. The company estimates that sales will increase by $45,000 during the coming year due to increased demand. By how much should net operating income increase?
4. Assume that the operating results for last year were as follows:

Sales	$360,000
Variable expenses	144,000
Contribution margin	216,000
Fixed expenses	180,000
Net operating income	$ 36,000

   a. Compute the degree of operating leverage at the current level of sales.
   b. The president expects sales to increase by 15% next year. By how much should net operating income increase?
5. Refer to the original data. Assume that the company sold 28,000 units last year. The sales manager is convinced that a 10% reduction in the selling price, combined with a $70,000 increase in advertising expenditures, would increase annual unit sales by 50%. Prepare two contribution format income statements, one showing the results of last year's operations and one showing what the results of operations would be if these changes were made. Would you recommend that the company do as the sales manager suggests?

SET-B

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Memofax, Inc., produces memory enhancement kits for fax machines. Sales have been very erratic, with some months showing a profit and some months showing a loss. The company's contribution format income statement for the most recent month is given below:

Sales (13,500 units at $20 per unit)	$270,000
Variable expenses	189,000
Contribution margin	81,000
Fixed expenses	90,000
Net operating loss	$ (9,000)

Required:

1. Compute the company's CM ratio and its break-even point in both units and dollars.
2. The sales manager feels that an $8,000 increase in the monthly advertising budget, combined with an intensified effort by the sales staff, will result in a $70,000 increase in monthly sales. If the sales manager is right, what will be the effect on the company's monthly net operating income or loss? (Use the incremental approach in preparing your answer.)
3. Refer to the original data. The president is convinced that a 10% reduction in the selling price, combined with an increase of $35,000 in the monthly advertising budget, will double unit sales. What will the new contribution format income statement look like if these changes are adopted?
4. Refer to the original data. The company's advertising agency thinks that a new package would help sales. The new package being proposed would increase packaging costs by $0.60 per unit. Assuming no other changes, how many units would have to be sold each month to earn a profit of $4,500?
5. Refer to the original data. By automating, the company could slash its variable expenses in half. However, fixed costs would increase by $118,000 per month.
   a. Compute the new CM ratio and the new break-even point in both units and dollars.
   b. Assume that the company expects to sell 20,000 units next month. Prepare two contribution format income statements, one assuming that operations are not automated and one assuming that they are.
   c. Would you recommend that the company automate its operations? Explain.

SET-A