**Assignment 4 – Target Costing and Value Engineering**

**This is assignment is out of 45 points and is worth 3% of your final grade.**

For this assignment, you are required to complete the attached problem, exhibiting your understanding of the chapter material, and the ability to calculate all required elements of the assignment. You are required to:

1. Solve for the company's break-even point in unit sales using the equation method.
2. Solve for the company's break-even point in sales dollars using the equation method and CM ratio.
3. Solve for the company's break-even point in unit sales using the contribution margin method.
4. Solve for the company's break-even point in sales dollars using the contribution margin met and the CM ratio.
5. Compute the break-even point for the Gala (in terms of the number of persons that must attend.)
6. Assume only 200 persons attended the Gala last year. If the same number attend this year, what price per ticket must be charged to break even?
7. Using the $40 ticket price per person amount, prepare a CVP graph for the Gala from zero tickets up to 600 tickets sold.
8. What is the product's CM ratio?
9. Use the CM ratio to determine the break-even point in sales dollars.
10. The company estimates that sales will increase by $60,000 during the coming year due to increased demand. By how much should operating income increase?
11. Assume that the operating results for last year were as follows:
    1. Sales $600,000
    2. Variable expenses 240,000
    3. Contribution margin 360,000
    4. Fixed expenses 270,000
    5. Operating income $90,000
    6. Compute the degree of operating leverage at the current level of sales.
    7. The president expects sales to increase by 16% next year. By how much should operating income increase?
12. Refer to the original data. Assume that the company sold 23,000 units last year. The sales manager is convinced that a 12% reduction in the selling price, combined with a $40,000 increase in advertising expenditures, would cause annual sales in units to increase 30%. 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?

Refer to the original data. Assume again that the company sold 23,000 units last year. The president feels that it would be unwise to change the selling price. Instead, he wants to increase the sales commission by $4 per unit. He thinks that this move, combined with some increase in advertising, would increase annual unit sales by 50%. By how much could advertising be increased with profits remaining unchanged? Do not prepare an income statement; use the incremental analysis approach.

This assignment must be submitted with a cover page, include headings, appendices and adhere to all assignment policies and protocols.

**Scoring rubric**

| **Section** | **Scoring Level** | **Requirements** | **Points** |
| --- | --- | --- | --- |
| Respond to all requirements of the assignment | 18-20 excellent  15-17.9 good  10-14.9 satisfactory  0-9.9 poor | - clear, concise explanation of key points of the assignment  - providing responses relevant to the module | /30 |
| Linkages to lesson(s) | 18-20 excellent  15-17.9 good  10-14.9 satisfactory  0-9.9 poor | - demonstrating understanding of linkages from assignment to lesson(s) when addressing the assignment requirements  - referencing specific theories and concepts from module(s) | /20 |
| Overall Structural Quality | 8-10 excellent  6.1-7.9 good  5-6 satisfactory  0-4.9 poor | - word processed  - double spaced  - 12 point font for all sections  - paragraph form, essay style  - cover page  - section headings  - proper grammar, correct spelling (evidence of proofreading)  - formatted as per policy  - complete bibliography referencing all work of other individuals, including course notes, textbooks, journals, websites, interviews, proprietary documents within APA reference style | /5 |
| TOTAL | | | **/45** |