Requirements

1. Compute revenue and variable costs for each show.
2. Use the income statement equation approach to compute the number of shows British Productions must perform each year to break even.
3. Use the contribution margin approach to compute the number of shows needed each year to earn a profit of $3,825,000. Is this profit goal realistic? Give your reasoning.
4. Prepare British Productions' contribution margin income statement for 120 shows for 2011. Report only two categories of costs: variable and fixed.

P18-25A *(L. OBJ. 2, 3, 4)* **Analyzing CVP relationships [30–45 min]**

Allen Company sells flags with team logos. Allen has fixed costs of $588,000 per year plus variable costs of $5.50 per flag. Each flag sells for $12.50.

Requirements

1. Use the income statement equation approach to compute the number of flags Allen must sell each year to break even.
2. Use the contribution margin ratio CVP formula to compute the dollar sales Allen needs to earn $32,200 in operating income for 2011.
3. Prepare Allen's contribution margin income statement for the year ended December 31, 2011, for sales of 73,000 flags. Cost of goods sold is 60% of variable costs. Operating costs make up the rest of variable costs and all of fixed costs.
4. The company is considering an expansion that will increase fixed costs by 20% and variable costs by $0.60 cents per flag. Compute the new breakeven point in units and in dollars. Should Allen Company undertake the expansion? Give your reasoning.

P18-26A *(L. OBJ. 2, 3, 4)* **Computing breakeven sales and sales needed to earn a target operating income; graphing CVP relationships; sensitivity analysis [30–45 min]**

Big Time Investor Group is opening an office in Dallas. Fixed monthly costs are office rent ($8,200), depreciation on office furniture ($1,500), utilities ($2,300), special telephone lines ($1,300), a connection with an online brokerage service ($2,900), and the salary of a financial planner ($11,800). Variable costs include payments to the financial planner (9% of revenue), advertising (12% of revenue), supplies and postage (4% of revenue), and usage fees for the telephone lines and computerized brokerage service (5% of revenue).

Requirements

1. Use the contribution margin ratio CVP formula to compute Big Time's breakeven revenue in dollars. If the average trade leads to $800 in revenue for Big Time, how many trades must be made to break even?
2. Use the income statement equation approach to compute the dollar revenues needed to earn a target monthly operating income of $11,200.
3. Graph Big Time's CVP relationships. Assume that an average trade leads to $800 in revenue for Big Time. Show the breakeven point, the sales revenue line, the fixed cost line, the total cost line, the operating loss area, the operating income area, and the sales in units (trades) and dollars when monthly operating income of $11,200 is earned. The graph should range from 0 to 80 units.
4. Suppose that the average revenue Big Time earns increases to $900 per trade. Compute the new breakeven point in trades. How does this affect the breakeven point?