Calculating the Break-Even Point

1. The Break-Even Point - is an important calculation to know how much product needs to be sold before any net profit is made.
2. Sales price per unit - minus variable cost per unit (COGS) equals gross profit.
3. Gross profit per unit - divided by total fixed expenses per year equals the number of units to sell to break even.
4. The Break-Even Point - is when sales are equal to expenses.

    A. This is an example:
    - Sales price per unit: $100
    - Variable costs or Cost of Goods Sold (COGS) per unit: $25
    - Gross Profit per unit: $75
    - Gross profit may be the same as the Contribution Margin in this simplified example.
    - If Fixed Expenses total $24,000 for the year, we divide it by the gross profit of $75 and the result is 320 units need to be sold to break-even.

    B. To check this number, we calculate the totals.
    - 320 units sold * $100 (sales price) = $32,000 in annual sales,
    - Minus 320 units * $25 (variable cost per unit) = $8,000 in Direct Cost of Goods Sold Expense,
    - Minus fixed expenses annual total of $24,000 totals zero profit or loss.
    - $32,000- $8000- $24,000= 0 Sales minus expenses = zero.

    C. We calculated the break-even point correctly at 320 units.

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D. What if we add a second product line or item? We need to divide the fixed expenses between the two product lines. The easiest way to do this is to allocate by percentage of sales. If product one is 80% of sales, then we could use 80% of the fixed expenses to calculate break even for product line one and 20% for product line two.

E. Other ways to allocate fixed expenses might be by percentage of space required for each enterprise, hours of production, percentage of investment, or what makes the most sense. Be sure that all 100% of the fixed expenses get allocated.

5. SBDC consultants and accounting business professionals can help:

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