Cost Behavior – Analysis and Use

Mixed Costs: Contains both variable and fixed cost elements.

\[ Y = a + bx \]

\[ Y = \text{Total Mixed Costs, Dependent Variable} \]
\[ A = \text{Total Fixed Costs} \]
\[ B = \text{Variable Costs per unit} \]
\[ X = \text{Level of Activity, Independent Variable} \]

*This equation allows you to calculate what the total mixed costs would be for any level of activity within the relevant range.

*This is the same as the slope formula learned in algebra \( Y = mx + b \), and the point-slope formula \( y - y_1 = m(x - x_1) \).

High-Low Method: A method of separating a mixed cost into its fixed and variable elements by analyzing the change in cost between the high and low activity levels

\[
\text{Variable Cost} = \frac{\text{Change In Cost}}{\text{Change in Activity}} = \text{Slope of the Line} = b
\]

\[
B = \frac{Y_2 - Y_1}{X_2 - X_1}
\]

*Then use \( B \), and two points (either \( X_2 & Y_2 \) or \( X_1 & Y_1 \)) to solve for Total Fixed costs.

\[ Y = a + bx \]
\[ A = y - bx \]

Fixed cost element = Total Cost minus Variable Cost Element

*Then create equation for your data. Example \( y = #x + # \).

Contribution Margin: The amount remaining from sales revenues after variable expenses have been deducted

\[
\text{Sales} \quad \text{xx} \\
\text{Less: Variable Costs} \quad (\text{xx}) \\
= \text{Contribution Margin} \quad \text{xx} \\
\text{Less: Fixed Costs} \quad (\text{xx}) \\
= \text{Net Income} \quad \text{xx}
\]