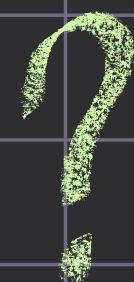


GENERAL

The relationship can be Linear / Non-linear. The idea is to find a relationship between total cost | volume | total revenue.

P.s remember a graph is just a visual picture of a mathematical equation!



BREAK-EVEN

For a single product (in units):
 $\text{Break-even units} = \text{Fixed Cost} / \text{Contribution per unit.}$

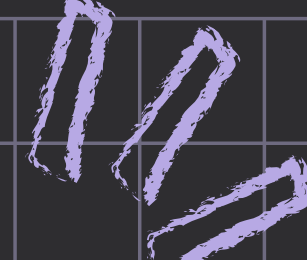
This tells us where our profit will be 0 but ALL expenses are covered.



TARGET PROFIT

Units sold for target profit = $(\text{Fixed Cost} + \text{Target Profit}) / \text{Contributions per unit.}$

You can shuffle the equation to solve for different variables



CVP ANALYSIS

MULTI PRODUCT

Break even steps for 2 products:

1. Determine the sales mix.
2. Determine the individual contribution per product.
3. Calculate the weighted contribution
4. Fixed Cost / Weighted Contribution
5. Step 4 x Sales Mix = Break-even per product

MARGIN OF SAFETY

Shows how much sales can decrease before a loss is incurred:

$$\% = (\text{Expected Sales} - \text{break-even Sales}) / (\text{Expected Sales})$$

PROFIT - VOLUME RATIO

More commonly known as the contribution margin ratio:

$$\text{PV Ratio} = (\text{Profit} + \text{Fixed Cost}) / \text{Sales Revenue}$$

Proportion of sales available to cover fixed cost and provide for a profit.

