Formulas

Gross Profit = Sales − Cost of goods sold

Operating Profit = Gross Profit − Operating expenses,

Profit Before Tax (PBT) = Operating Profit − Interest

Net Profit = PBT − Income Tax

Retained Profit = Net Profit − Dividend

EBITDA = Earnings (profit) before interest, tax, depreciation & amortization

[**OP** subtracts dep., amort, but EBITDA does not]

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

$$\text{Operating Profit Margin} = \frac{\text{Op Profit}}{\text{Sales}} \times 100$$

⋮

Cost of Goods Sold = (Opening Stock + Purchase during period − Closing Stock)

[**Income tax** is calculated as a percentage of **PBT**]

Depreciation

St. line method.

$$\text{Dep} = (\text{Procurement cost} − \text{Salvage value}) / \text{Useful life}$$

Book value → ~~value~~ cost − accumulated dep.

  ↳ At a point in year.

  ↳ Also called carrying amount of fixed asset.

Declining Balance / Reducing Val method

Dep. charged on fixed % of book value of asset of prev. yr.

Book val (at end of yr) = ~~Dep. of~~ Book val (at beg. of yr)
                          − Dep [% of ↑]

Amortization

└ Fixed amt over fixed no. of yrs.

$$= \frac{(\text{Total amt})}{\text{yrs}}$$

BEP

Profit (p) = Sales − ~~Cost~~ Total Cost

Total costs = Fixed costs + variable costs

$$= F + Q * V$$

F: total fixed cost
Q: no. of units sold
V: var. cost per unit

Sales = Q * S   [S: Selling price per unit]

$\therefore$ Profit (P) = Q * S − Q * V − F

$$\Rightarrow Q = \left(\frac{F + P}{S - V}\right)$$

For breakeven, P = 0

$$\therefore Q_{BEP} = \left(\frac{F}{S-V}\right) = \left(\frac{\text{Fixed Cost}}{\text{Contribution Margin}}\right)$$

Total contribution = No. of units sold * Contribution Margin
$\qquad\qquad\qquad\quad$ = Total Sales − Total Costs

Operating Leverage

$$DOL = \frac{\% \text{ Change in EBIT}}{\% \text{ Change in sales}}$$

$$= \frac{\text{Sales − Variable costs}}{\text{Sales − Variable costs − fixed costs}}$$