



DICTIONARY OF FORMULA
FOR
COST ACCOUNTING
AND
MANAGERIAL ACCOUNTING

E-BOOK

For easy reference/revision append below a snapshot or summary of the common formula used in costing and managerial accounting:

| BREAKEVEN ANALYSIS FORMULAS | |
|------------------------------------|---|
| Breakeven point (quantity) | $\frac{\text{Fixed cost}}{\text{Contribution per unit}}$ |
| Breakeven point-(value) | $\frac{\text{Sales value} \times \text{fixed cost}}{\text{Total contribution}}$ |
| Breakeven point- (value) | $\frac{\text{Fixed cost}}{\text{Contribution sales ratio}}$ |
| Contribution | $\text{Sales minus marginal(variable) cost}$ |
| Contribution | $\text{Fixed cost plus profit}$ |
| Contribution sales ratio | $\frac{\text{Contribution}}{\text{Sales}}$ |
| Margin of safety | $\text{Sales level minus breakeven point (quantity)}$ |
| Margin of safety | $\frac{\text{Profit}}{\text{Contribution sales ratio}}$ |
| Profit | $\text{Contribution minus fixed cost}$ |





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E-BOOK

| OVERHEAD COSTING FORMULAS | |
|--------------------------------------|---|
| Cost unit rate | <u>Budgeted overhead</u> Budgeted output |
| Direct material cost % rate | <u>Budgeted overhead</u> x 100 % Budgeted direct material costs |
| Direct labor cost % rate | <u>Budgeted overhead</u> x 100 % Budgeted direct labor cost |
| Direct labor hour rate | <u>Budgeted overhead</u> Budgeted direct labor hours |
| Predetermined absorption rate | <u>Estimated or budgeted overhead for the period</u> Estimated or budgeted units of base for the period |
| Prime cost % rate | <u>Budgeted overhead</u> X 100 Budgeted Prime cost |
| Machine hour rate | <u>Budgeted overhead</u> Budgeted machine hours |
| Based on Production/Output | <u>Budgeted overhead</u> Budgeted units produced |
| Non-production overheads | |
| Administration Costs | <u>Budgeted admin cost</u> Budgeted production cost Or <u>Budgeted admin cost</u> Budgeted conversion cost |
| Selling & Marketing Costs | <u>Budgeted selling & marketing cost</u> Budgeted sales value Or <u>Budgeted selling & marketing cost</u> Budgeted production cost |





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E-BOOK

| MATERIALS COSTING FORMULAS | |
|-------------------------------------|---|
| Economic Order Quantity(EOQ) | Square of $2ab/c$ |
| Minimum level | Re-order level – (Average usage x Average re-order period) |
| Maximum level | Re-order level + Quantity ordered-(Minimum usage x Minimum re-order period) |
| Re-order level | Maximum usage x Maximum re-order period |
| Stock Turnover | <u>Cost Of materials stock consumed</u> Average stock of materials |

| COSTING FOR LABOR FORMULAS | |
|-----------------------------------|--|
| Labor Turnover rate | <u>No of employees left and replaced</u> Average number of employee |
| Halsey scheme | $\frac{1}{2}$ x Time saved x Wage rate per hour |





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E-BOOK

| CONTRACT COSTING FORMULAS | |
|---|---|
| Cost of work certified | Cost of all work to date – Cost of work not certified |
| Profit to be taken on a contract | $\frac{2}{3}$ (Value of work certified-Cost of Work certified) x Cash received/Value of work certified |
| Profit in suspense | Total profit on the contract to date – Profit taken into account. |

| PROCESS COSTING FORMULAS | |
|------------------------------------|---|
| Abnormal gain/(loss) | Actual loss – normal loss |
| Total equivalent production | Completed units + Equivalent units in Work in Progress (WIP) |





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E-BOOK

| STANDARD COSTING & VARIANCE ANALYSIS FORMULAS | |
|--|--|
| MATERIALS: | |
| Materials PRICE variance | $(\text{Actual price} - \text{Standard price}) \times \text{Actual quantity}$ (use purchase quantity if it is given) |
| Material USAGE variance | $(\text{Actual Quantity Used} - \text{Standard Quantity of Actual Production}) \times \text{Standard Price}$ |
| Material COST Variance | Material Price Variance + Material Usage Variance |
| | |
| Material MIX variance | $(\text{Actual Mix} - \text{Standard Mix}) \times \text{Standard Price}$ |
| Materials YIELD variance | $(\text{Actual Output} - \text{Standard Output}) \times \text{Standard Cost of Output}$ |
| Material USAGE variance | Material Mix Variance + Materials Yield Variance |
| | |
| LABOR: | |

(Page 5)





DICTIONARY OF FORMULA
FOR
COST ACCOUNTING
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MANAGERIAL ACCOUNTING

E-BOOK

| | |
|----------------------------------|--|
| Labor RATE variance | (Actual Rate-Standard Rate) x Actual Hours Paid |
| Labor EFFICIENCY variance | (Actual Hours worked- Standard ours of Actual Production) x Standard Rate |
| Labor IDLE TIME variance | Idle time x Standard Rate |
| Labour COST variance | Labor Rate variance + Labor Efficiency variance + Idle Time variance |
| | |
| <u>VARIABLE OVERHEAD:</u> | |
| EXPENDITURE variance | (Actual Rate-Standard Rate) x Actual Hours Worked |
| EFFICIENCY variance | (Actual Hours worked-Standard Hours of actual production) x Standard Rate |
| COST variance | Expenditure variance + Efficiency variance |
| <u>FIXED OVERHEAD:</u> | |
| EXPENDITURE variance | (Actual Expenditure-Budgeted Expenditure) |





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E-BOOK

| | |
|---|---|
| VOLUME variance | (Budgeted Hours-Standard Hours of Actual Production) x Standard Rate |
| COST variance | (Expenditure variance + Volume variance) |
| CAPACITY variance | (Budgeted Hours-Actual Hours) x Standard Rate |
| EFFICIENCY (PRODUCTIVITY) variance | (Actual Hours-Standard Hours of Actual Production) x Standard Rate |
| VOLUME variance | (Capacity Variance + Efficiency Variance) |
| | |
| <u>SALES :</u> | |
| PRICE variance | (Actual Price-Standard Price) x Actual Quantity |
| VOLUME variance | |
| (a) Sales Value method: | (Actual Quantity-Budgeted Quantity) x Standard Selling Price |
| (b) Sales Margin method: | (Actual Quantity-Budgeted Quantity) x Standard Contribution |





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**STANDARD COSTING & VARIANCE ANALYSIS FORMULAS UNDER THE
STANDARD MARGINAL COSTING TECHNIQUES:**

(a) No volume variance under fixed overhead

**(b) Sales margin volume variance= (Actual Quantity-Budgeted Quantity) X
Standard Contribution**

(Page 8)

