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“Dedicated to helping Students & Teachers”

DICTIONARY OF FORMULA  
FOR  
COST ACCOUNTING  
AND  
MANAGERIAL ACCOUNTING

*E-BOOK*

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

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

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

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

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





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<b>STANDARD COSTING &amp; VARIANCE ANALYSIS FORMULAS</b>	
<b>MATERIALS:</b>	
<b>Materials PRICE variance</b>	<b>(Actual price-Standard price) x Actual quantity</b> <b>( use purchase quantity if it is given)</b>
<b>Material USAGE variance</b>	<b>(Actual Quantity Used-Standard Quantity of Actual Production) x Standard Price</b>
<b>Material COST Variance</b>	<b>Material Price Variance + Material Usage Variance</b>
<b>Material MIX variance</b>	<b>(Actual Mix – Standard Mix) x Standard Price</b>
<b>Materials YIELD variance</b>	<b>(Actual Output-Standard Output) x Standard Cost of Output</b>
<b>Material USAGE variance</b>	<b>Material Mix Variance + Materials Yield Variance</b>
<b>LABOR:</b>	

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





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

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<b>STANDARD COSTING &amp; VARIANCE ANALYSIS FORMULAS UNDER THE STANDARD MARGINAL COSTING TECHNIQUES:</b>
<b>(a) No volume variance under fixed overhead</b>
<b>(b) Sales margin volume variance= (Actual Quantity-Budgeted Quantity) X Standard Contribution</b>

