



DICTIONARY OF FORMULA FOR COST & MANAGERIAL ACCOUNTING

FREE E-BOOK from <http://www.fmaccounting.com> and
<http://www.basiccollegeaccounting.com>

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	Sales minus marginal(variable) cost
Contribution	Fixed cost plus profit
Contribution sales ratio	$\frac{\text{Contribution}}{\text{Sales}}$
Margin of safety	Sales level minus breakeven point (quantity)
Margin of safety	$\frac{\text{Profit}}{\text{Contribution sales ratio}}$
Profit	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 $\frac{\text{Budgeted selling \& marketing cost}}{\text{Budgeted production cost}}$

MATERIALS COSTING FORMULAS



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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

CONTRACT COSTING FORMULAS



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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)

STANDARD COSTING & VARIANCE ANALYSIS FORMULAS



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MATERIALS:	
Materials PRICE variance	(Actual price-Standard price) x Actual quantity (use purchase quantity if it is given)
Material USAGE variance	(Actual Quantity Used-Standard Quantity of Actual Production) x Standard Price
Material COST Variance	Material Price Variance + Material Usage Variance
Material MIX variance	(Actual Mix – Standard Mix) x Standard Price
Materials YIELD variance	(Actual Output-Standard Output) x Standard Cost of Output
Material USAGE variance	Material Mix Variance + Materials Yield Variance
LABOR:	
Labor RATE variance	(Actual Rate-Standard Rate) x Actual Hours Paid
Labor EFFICIENCY variance	(Actual Hours worked- Standard ours of Actual



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	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)
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



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EFFICIENCY (PRODUCTIVITY) variance	(Actual Hours-Standard Hours of Actual Production) x Standard Rate
VOLUME variance	(Capacity Variance + Efficiency Variance)
SALES :	
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
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	



Finance, Management and Accounting

Accounting for the Masses

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