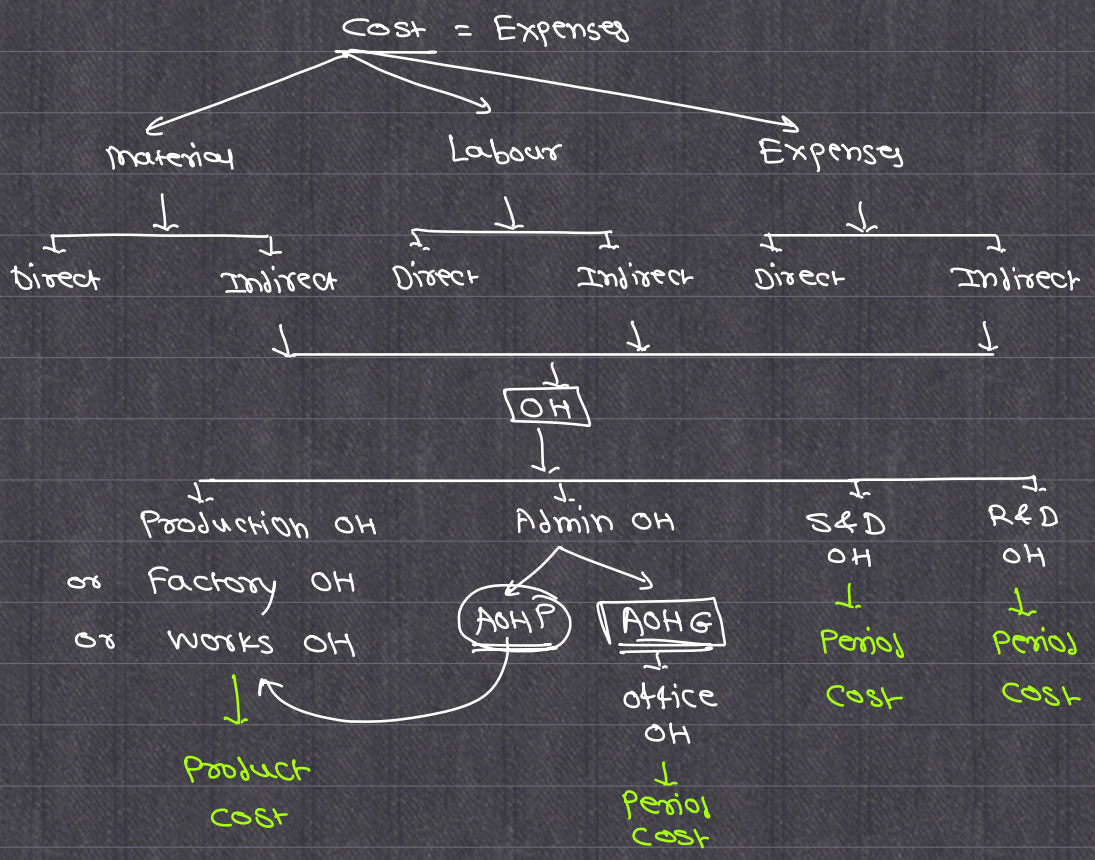
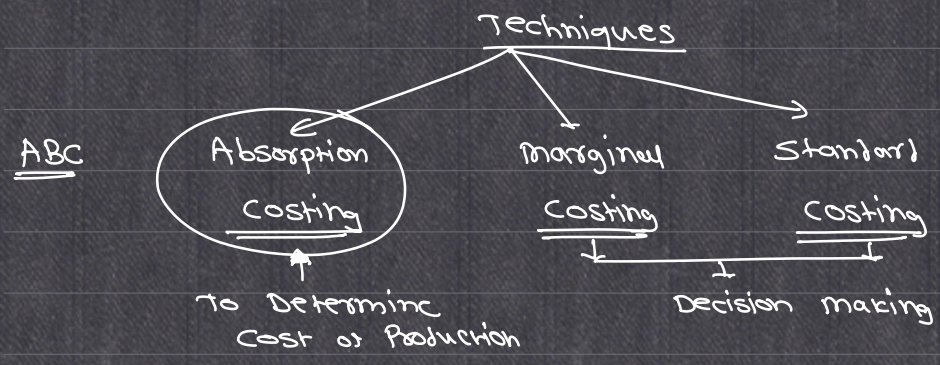
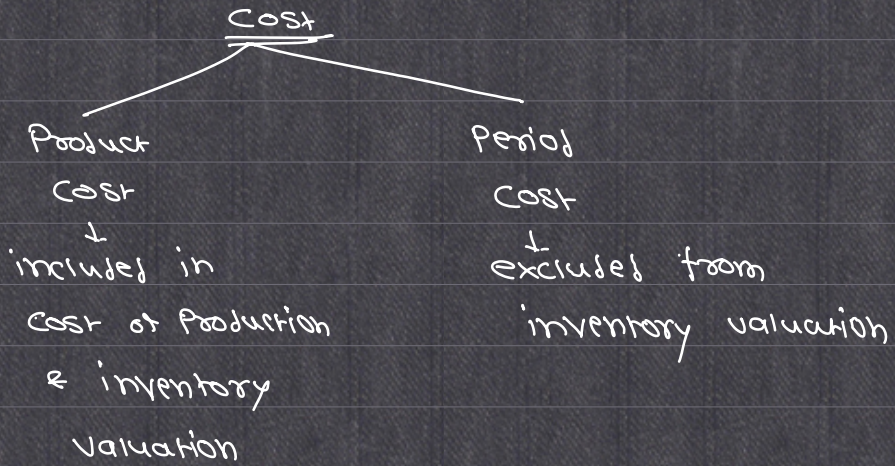


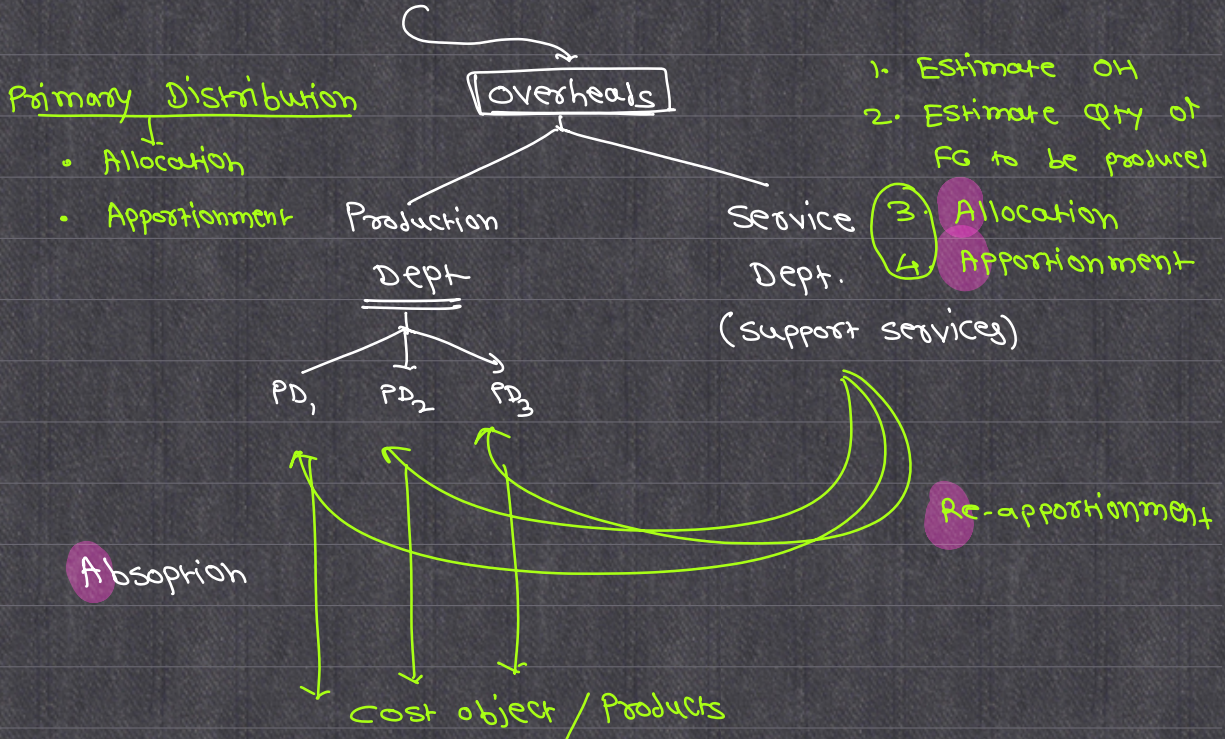
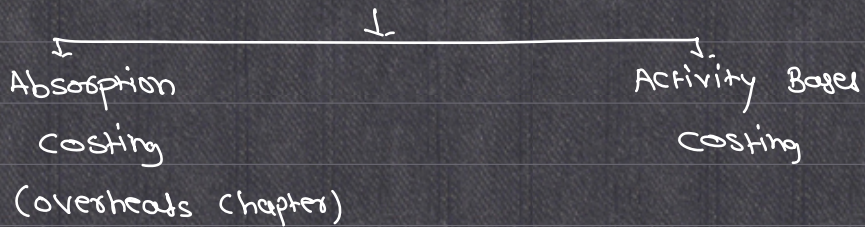
# Standard Costing



Works Cost or  
 Factory Cost = Prime Cost + Factory OH



How to Link OH to Cost object?



\* Absorption Rate = OH per unit or

£ 90/hour

OH per hour

Lab. Hour      machine Hours

= % of wages

= % of material

= % of prime cost

Factory overheads Control A/c

Actual OH incurred	To Stores Ledger Control A/c	Dr (Actual)	By WIP Control A/c	OH - Absorbed
	To Wages control	Dr (Actual)		
	To Cost Ledger A/c	Dr (Actual)		

$$\begin{aligned}
 \text{Absorbed OH} &= \text{Actual Hrs} \times \text{Absorption Rate/Hour} \\
 \downarrow \\
 \text{Std. Cost} &= \text{Std. Hrs for producing Actual output} \times \text{Absorption Rate/Hour}
 \end{aligned}$$

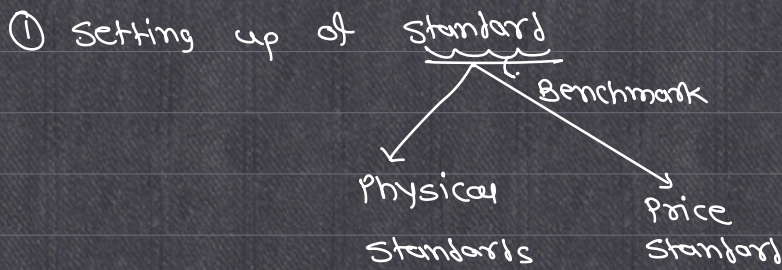
OR

$$= \text{Actual output} \times \text{Absorption Rate/Unit}$$

Under Absorption  
 =  
 Adverse Variance  
 =  
 Debit Balance

Over Absorption  
 =  
 Favourable Variance  
 =  
 Credit Balance

Standard Costing



② Calculate Standard Cost for Actual Output

③ Compare Std. Cost with Actual Cost i.e. Variance Calculation

④ Take corrective Action

Material Cost Variance

MCV = Std. Material Cost - Actual Material Cost

=  $(SQ \times SR) - (AQ \times AR)$

Qty of RM that  
 should have been  
 consumed for Actual q/p

AQ Consumed  
 From  
 Stores Ledger  
 (Issue Column)



$$MCV = \text{Std. Cost} - \text{Actual Cost}$$

$$= 98,000 - 106,540$$

$$= 8,540 (A)$$

### Analysis of MCV

SR. No.	Particulars	₹	₹
①	Material Price Variance		
	= (Std. Rate - Actual Rate) AQ Consumed		
	A = ( 3 - 3.2 )	(A)	
	B = ( 5 - 4.9 )	(F)	
	C = ( 2 - 2.6 )	(A)	
	D = ( 4 - 3.95 )	(F)	7,340 (A)
			<u>8,540 (A)</u>
②	Material Usage Variance		
	= (SQ - AQ) SR		
	A = ( - ) 3		
	B = ( - ) 5		
	C = ( - ) 2		
	D = ( - ) 4		12,000 (A)
			<u>8,540 (A)</u>

### Sub Analysis of Material Usage Variance

SR. No.	Particulars	₹	₹
1.	Material Yield Variance		
	= (Std. yield - Actual yield) × <u>SCM/unit</u>		

$$= (25820 - 25000) 3.92$$

$$3214.40(A)$$

2. Material mix variance

$$= (\underline{sm} - Am) SR$$

$$A = (7746 - 7900) 3 \quad (A)$$

$$B = (3615 - 2900) 5 \quad (F)$$

$$C = (10328 - 10900) 2 \quad (A)$$

$$D = \left( \frac{9811}{31500} - \frac{9800}{31500} \right) 4 \quad (F) \quad \underline{2013(F)}$$

$$\text{Total} \quad \underline{\underline{1201.40(A)}}$$

$$* MYV = (SQ - sm) SR$$

$$A = (7500 - 7746) 3 \quad 738(A)$$

$$B = (3500 - 3615) 5 \quad 575(A)$$

$$C = (10000 - 10328) 2 \quad 656(A)$$

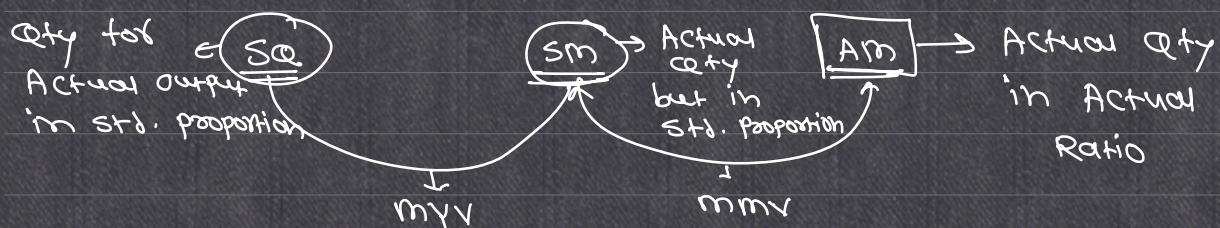
$$D = (9500 - 9811) 4 \quad \underline{1244(A)} \quad 3213(A)$$

WN Std. Cost of material (SCM) per unit of FG

$$= \frac{\text{Std. Cost for Actual output}}{\text{Actual output}}$$

$$= \frac{98,000}{25,000 \text{ kg}}$$

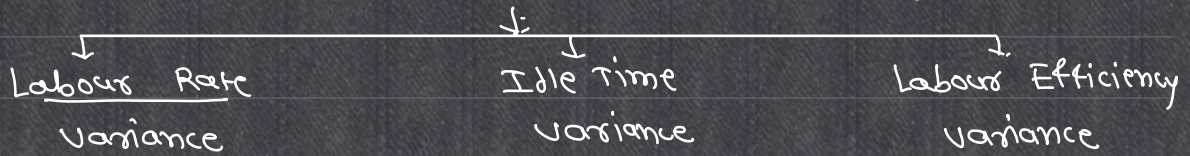
$$= 3.92/\text{kg}$$



## Labour Cost Variance

$$LCV = \text{Std. Cost} - \text{Actual Cost}$$

$$= \left( \frac{\text{SH for Actual output}}{\text{Actual output}} \times \text{Std. Rate} \right) - \left( \frac{\text{Actual Hours Paid for}}{\text{Actual Hours Paid for}} \times \text{Actual Rate} \right)$$



$$= (\text{SR} - \text{AR}) \times \text{Actual Hrs Paid}$$

$$= \text{Idle Time} \times \text{Std. Rate}$$

$$= (\text{SH} - \text{AH worked}) \times \text{Std. Rate}$$

↓

$$= (\text{Hrs Paid} - \text{Hrs worked})$$

↓

Labour Yield  
Variance

↓

Labour Mix  
Variance

$$= (\text{Std. yield} - \text{Actual yield}) \times \text{SCY/unit}$$

$$= (\text{SM} - \text{AM}) \times \text{SR}$$

↓  
Act. Hrs worked

OR

$$= (\text{Std. Hrs} - \text{Std. mix}) \times \text{SR/Hours}$$

↓

Actual Hours worked in Std. proportion

↓

Actual Hrs

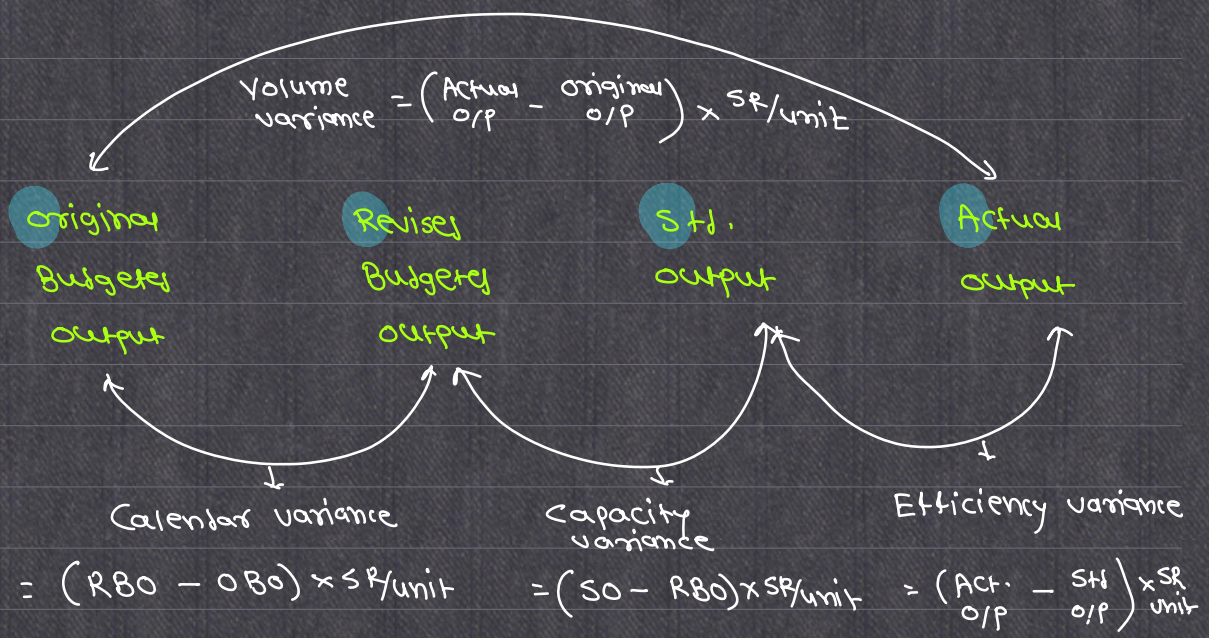
worked in Std. Ratio





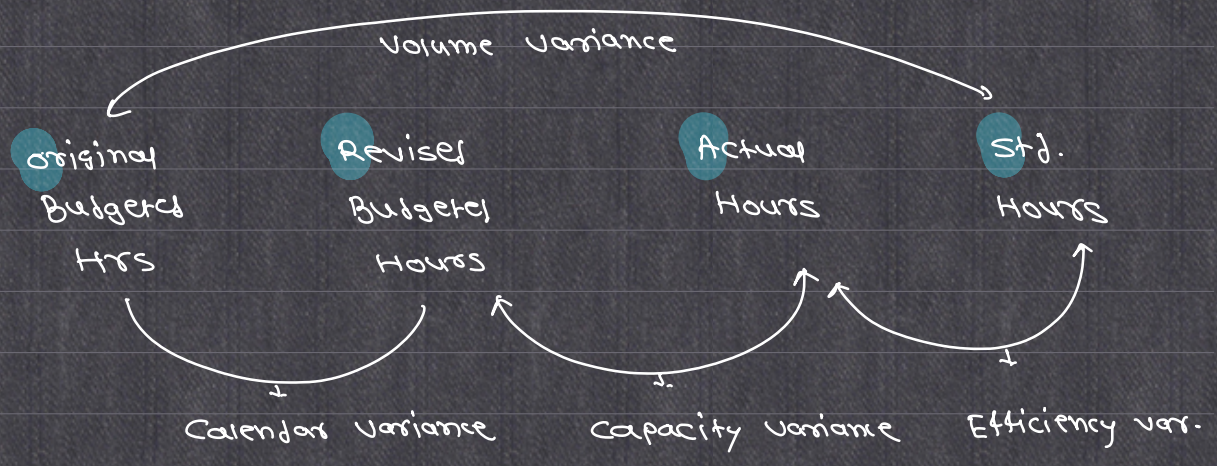
$$= \frac{\text{Budgeted OH}}{\text{OH}} - \frac{\text{Actual OH}}{\text{OH}}$$

Volume Variance (Output Based)



$$\text{Revised Budgeted Output} = \frac{\text{Original Budgeted o/p}}{\text{Original Budgeted Days}} \times \text{Revised No. of Days}$$

Volume Variance (Hours Based)



e.g.

$$\text{Budgeted OH} = ₹ 12,00,000$$

$$\text{Budgeted Qty} = 4,000 \text{ units}$$

$$\therefore \text{SR/unit} = \frac{12,00,000}{4,000}$$

$$= 300/\text{unit}$$

$$\text{Actual OH} = ₹ 14,25,000$$

$$\text{Actual output} = 4300/\text{units}$$

Ans:

$$\text{Absorbed OH} = \text{Actual O/P} \times \text{SR/unit}$$

or Std. OH

$$= 4300 \times 300$$

$$= 12,90,000$$

$$\text{FOH Cost Variance} = \text{Absorbed OH} - \text{Actual OH}$$

$$= 12,90,000 - 14,25,000$$

$$= 1,35,000 \text{ (A)}$$

$$\begin{array}{l} \downarrow \qquad \qquad \qquad \downarrow \\ \text{FOH Expenditure var} \qquad \qquad \qquad \text{FOH Volume Variance} \end{array}$$

$$= \text{Bud. OH} - \text{Actual OH}$$

$$= 12,00,000 - 14,25,000$$

$$= 2,25,000 \text{ (A)}$$

$$= \text{SR/unit} \times \left( \frac{\text{Actual O/P}}{\text{O/P}} - \frac{\text{Bud O/P}}{\text{O/P}} \right)$$

$$= 300 \times (4300 - 4000)$$

$$= 90,000 \text{ (F)}$$

$$= \frac{12,00,000}{4,000}$$

$$= \frac{12,00,000}{4300}$$

$$= 300$$

$$= 279.06$$

$$= 279.06 \times 4300 \text{ units}$$

$$= 90,000 \text{ (F)}$$

NOV 2023 Q. 5(a)

$$\begin{aligned}\text{Budgeted variable OH} &= 84000 \text{ units} \times 16/\text{unit} \\ &= 13,44,000\end{aligned}$$

$$\begin{aligned}\text{Budgeted Hours} &= 84000 \text{ units} \times 0.80 \text{ HRS/unit} \\ &= 67,200 \text{ HRS.}\end{aligned}$$

Std. Rate of Overheads

	variable OH	Fixed OH
Per Hour	$= \frac{13,44,000}{67,200}$	$= \frac{6,72,000}{67,200}$
	$= 20/\text{Hour}$	$= 10/\text{Hour}$
Per unit	$= \frac{13,44,000}{84,000}$	$= \frac{6,72,000}{84,000}$
	$= 16/\text{unit}$	$= 8/\text{unit}$

$$\text{Variable OH efficiency variance} = \left( \overset{\leftarrow}{\text{Std. O/P}} - \overset{\leftarrow}{\text{Actual O/P}} \right) \times \overset{\leftarrow}{\text{SR/unit}}$$

$$67200 (A) = (x - 87600) \times 16$$

$$67200 (A) = 16x - 1401600$$

$$67200 = 16x - 1401600$$

$$x = 91800 \text{ units}$$

$$\therefore \underline{\text{Std. O/P in Actual HRS}} = 91800 \text{ units}$$

HRS	units
0.80	1
?	91800

73440 HRS

↓  
Actual Hours

$$\begin{aligned}\text{Std. Hours for Actual output} &= 87600 \times 0.80 \\ &\text{units} \\ &= 70080 \text{ Hrs}\end{aligned}$$

$$\begin{aligned}\text{Var. OH efficiency var} &= \left( \frac{\text{Std. Hrs}}{\text{Hrs}} - \frac{\text{Actual Hrs}}{\text{Hrs}} \right) \times \text{SR/Hour}\end{aligned}$$

$$\begin{aligned}67200(A) &= (70080 - x) \times 20 \\ -67200 &= 14,01,600 - 20x \\ x &= 73,440 \text{ Hrs}\end{aligned}$$

(i) Variable OH Expenditure variance

$$= \left( \text{SR/Hour} - \frac{\text{Actual Rate/Hour}}{\text{Hrs}} \right) \text{Actual Hrs}$$

$$= \left( 20 - \frac{14,37,000}{73440} \right) 73440$$

$$= (20 - 19.56) 73440$$

$$= 31800 (F)$$

(ii) Fixed OH Expenditure variance

$$= \text{Budgeted OH} - \text{Actual OH}$$

$$= 672000 - 705000$$

$$= 33000 (A)$$

(iii) Fixed OH Efficiency variance

$$= (\text{Std. Hrs} - \text{Act. Hrs}) \times \text{SR/Hour}$$

$$= (70,080 - 73,440) \times 10$$

$$= 33600 (A)$$

(iv) Fixed OH Capacity variance

$$= (\text{Actual Hours} - \text{Budgeted Hrs}) \times \text{SR/Hours}$$

$$= (73440 - 67200) \times 10$$

$$= 62400 \text{ (F)}$$

### Hours Based

Budgeted Hrs	Actual Hrs	Std. Hrs
67200	73440	70080

$$\text{Capacity} = (\text{AH} - \text{BH}) \times \text{SR/Hours}$$

$$\text{Efficiency} = (\text{SH} - \text{AH}) \times \text{SR/Hours}$$

### Control Ratios

$$\textcircled{1} \text{ Efficiency Ratio} = \frac{\text{Std. Hrs for Act. O/P}}{\text{Actual Hrs}} \times 100$$

$$\frac{\text{SH}}{\text{AH}} \times \frac{\text{AH}}{\text{BH}} = \text{OR}$$

$$= \frac{\text{Actual output}}{\text{Std. output in Act. Hrs}} \times 100$$

$$\frac{\text{AO}}{\cancel{\text{SO}}} \times \frac{\cancel{\text{SO}}}{\text{BO}}$$

$$\textcircled{2} \text{ Capacity Ratio} = \frac{\text{Actual Hrs}}{\text{Budgeted Hrs}} \times 100$$

$$= \boxed{\text{OR}}$$

$$= \frac{\text{Std. output}}{\text{Bud. output}} \times 100$$

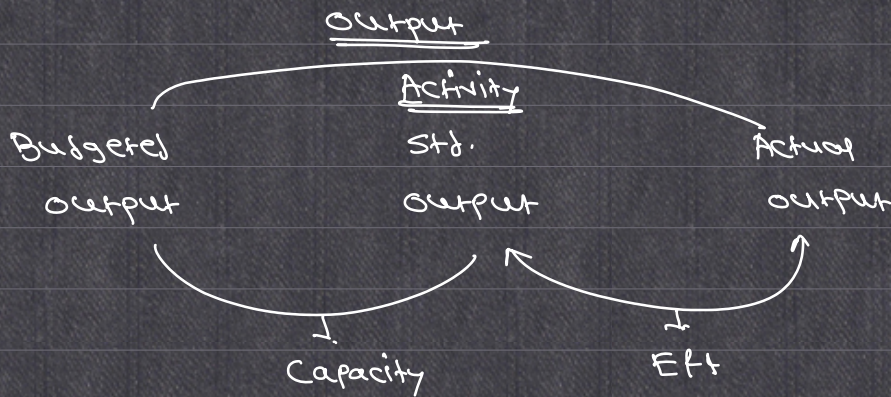
$$\textcircled{3} \text{ Activity Ratio} = \frac{\text{Std. Hrs}}{\text{Bud. Hrs}} \times 100$$

OR

$$= \frac{\text{Actual output}}{\text{Budgeted output}} \times 100$$

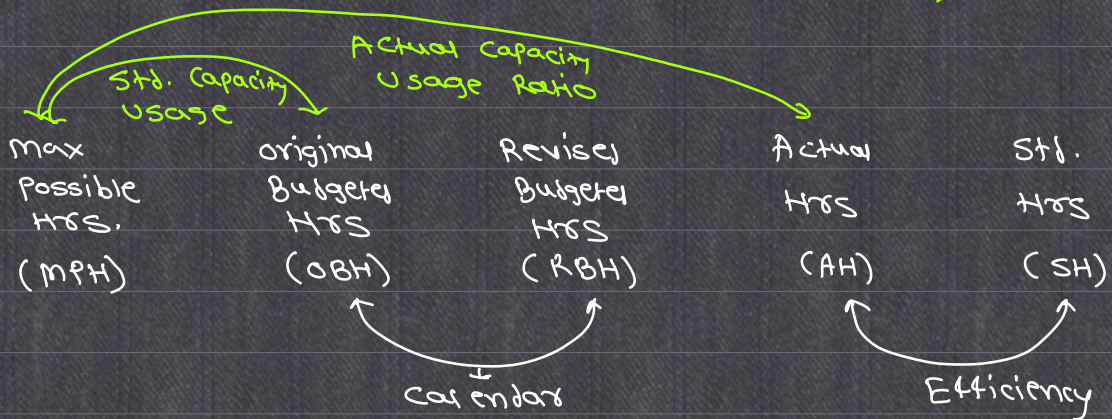
OR

$$= \text{Efficiency Ratio} \times \text{Capacity Ratio}$$



BH                      Hrs                      SH  
   AH

### Control Ratios (Detailed version)



$$\textcircled{1} \text{ Efficiency Ratio} = \frac{\text{Std. Hrs}}{\text{Act. Hrs}} \times 100$$

$$\textcircled{2} \text{ Calendar Ratio} = \frac{\text{RBH}}{\text{OBH}} \times 100 \quad \boxed{\text{OR}} \quad \frac{\text{Actual Days}}{\text{Budgeted Days}} \times 100$$

$$\textcircled{3} \text{ Capacity Ratio} = \frac{\text{Utilised}}{\text{Available}} \times 100$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ \text{Std. Capacity} & \text{Actual} & \text{Actual usage} \\ \text{Usage Ratio} & \text{Capacity Usage Ratio} & \text{of Budgeted Capacity} \\ = \frac{\text{OBH}}{\text{MPH}} \times 100 & = \frac{\text{AH}}{\text{MPH}} \times 100 & = \frac{\text{AH}}{\text{OBH}} \times 100 \end{array}$$



$$\textcircled{4} \text{ Activity Ratio} = \frac{\text{Std. Hrs}}{\text{original Budgeted Hrs}} \times 100$$

### Profitability Statement under Std. Costing

Particulars	₹	₹
Actual sales		- - -
Less: Standard cost of sales ( <u>Qty sold</u> × <u>SR/unit</u> )		- - -
∴ Standard Profit		- - -
Add: Favourable cost variance		- - -
Less: Adverse cost variance		( - - - )
Add: Favourable sales variance		
Less: Adverse sales variance		



∴ Actual Profit

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