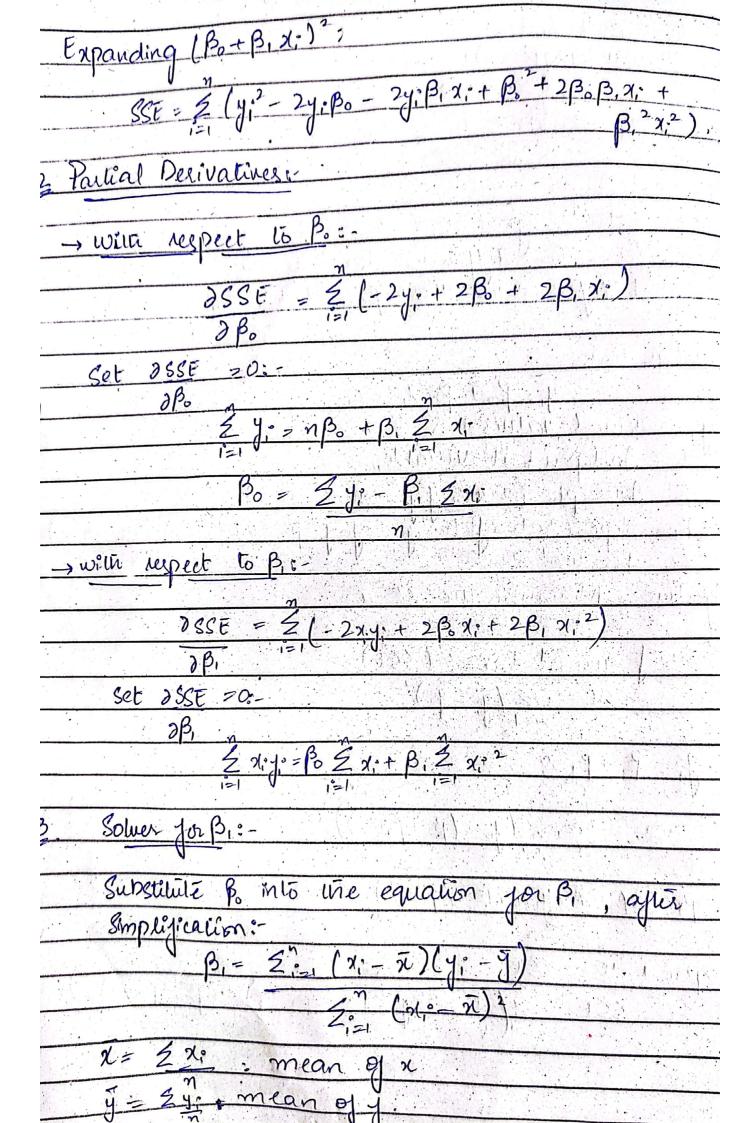
a tack # Linear Kegressian.	
3	
Syrda Ramab Falima W25-PAK-INP-AI-01	
W25-PAK-INP-AI-01	-
Lineou Regression:	
1 Problem Setup:	1, 1,
9t seeks to jind the best-jit line wat " minimizes the objective between the observed (y:) and the predicted values (y:).	
observed (4:) and wir predicted values (9:).	******
Sisserval (1)	1,1
≥ Model Equation:	
y:= Bo + B; X: + E;	
y: actual values	
x: = Independent variable	en en e
B. Interest (value of 4 when x=0)	
Be = groucept (value of y when x=0) P = slope (rate of change of y per unit change is	7 21
e; = Residual evor	.1.
2 Objective : Minemère une ellore-	
Sum of Squared Errors (SSE):	7.00
$SSE = \frac{2}{2}(y_1 - \hat{y_1})^2$	
4; = B0 + B1 21;	170
V 7	
(SE- Σ(j(β,+β,x;)).	
5.7	
● 3 Optimal Coefficients (Bo, Bi):-	-
s Turker confidence (Po)/1/2-	
1 Expand we CRE	
SCE = 2/42 - 24: (Bo + B, X) + (B + B, X.)	2
(1 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	/
	-

...



y solver por Bo Substitute B. back into:

Po = J - B, X

Final Equation:

[ŷ=Bo+Bn]