sed el modero de vegresión In = p(Xn) WT + Tn, con [the R. Xn & R.] PEs, WERR, 1: RP - Ra, Q = P y no ~ N (no 10, 00).

Presente el Problemo de Ostimización Canterennal y la Solveron del mismo Para los moderos

ln = o (xn) WT + nn

 $\eta_n \sim N\left(\eta_n | 0, \sigma^2\right)$

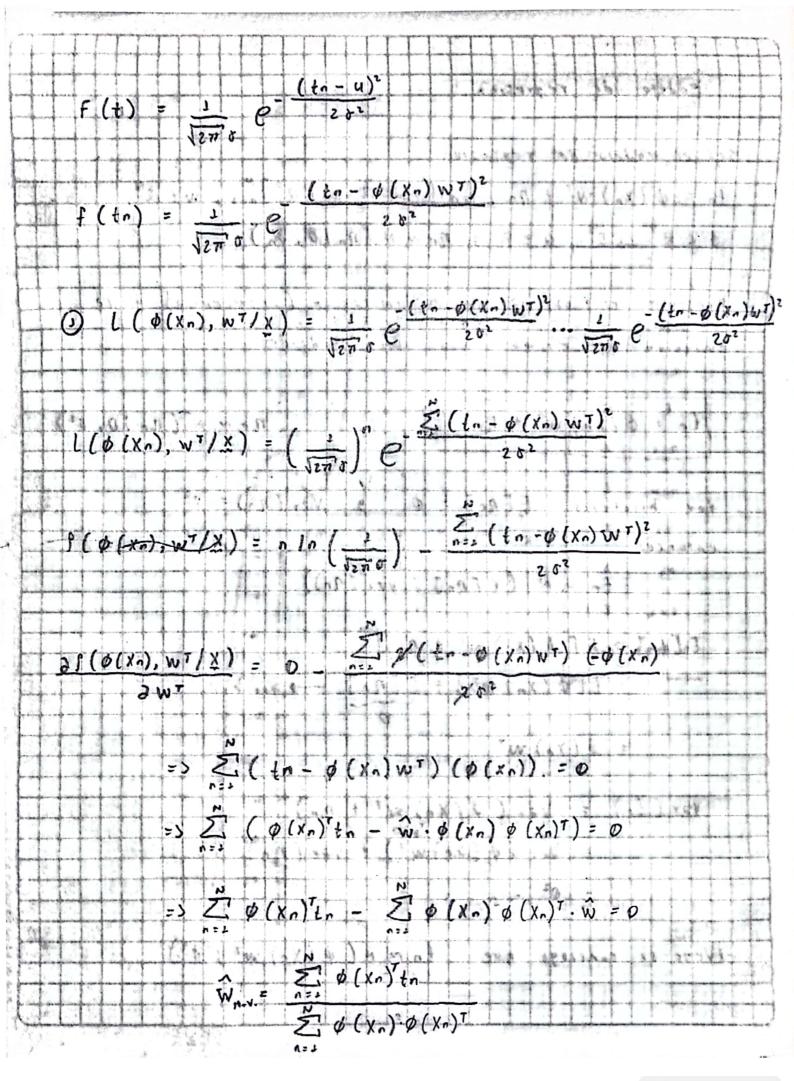
Por hipotesis E[nn] = 0. y Var (nn) = 82 entorces

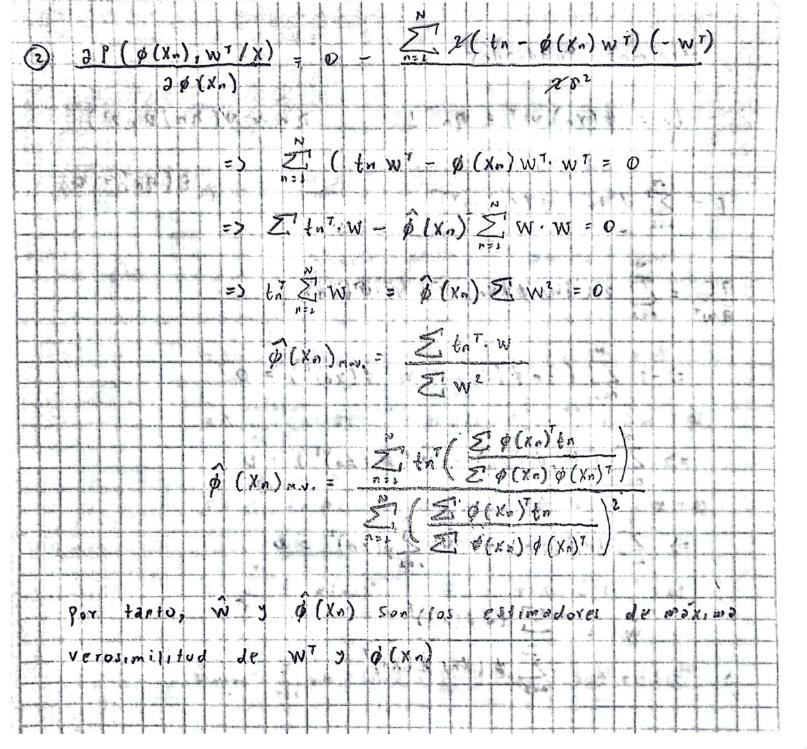
to ~ NI (E[Ra] ; Var (2n)).

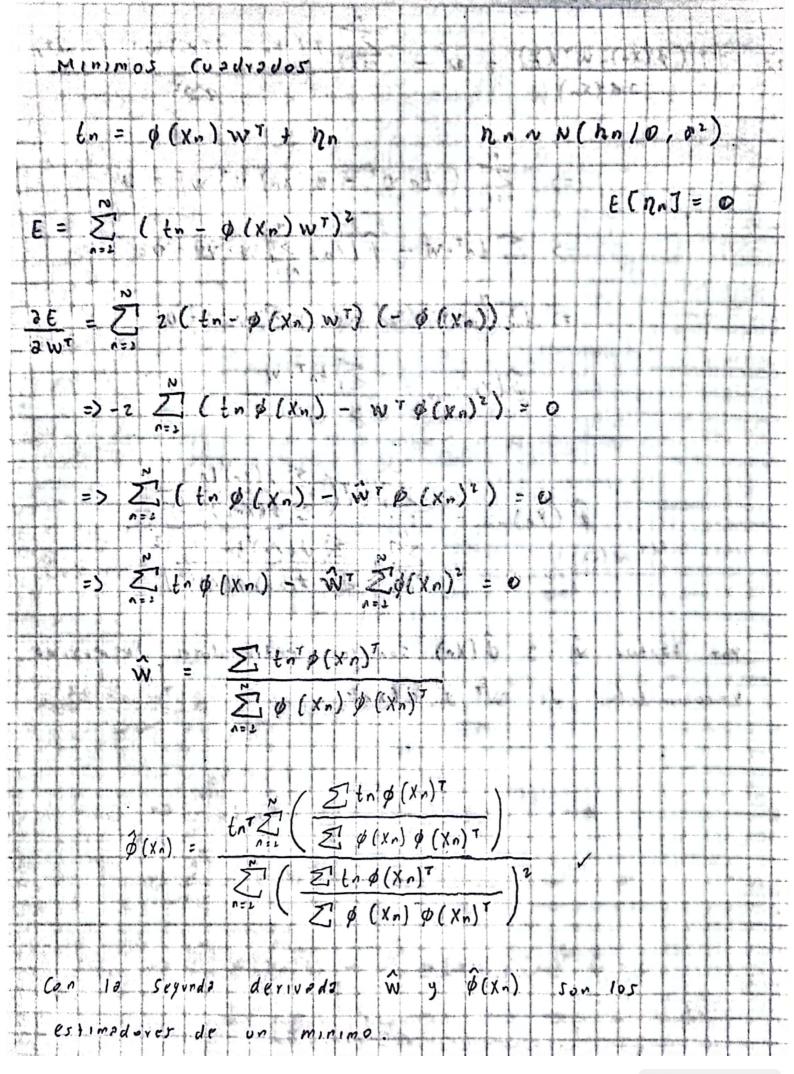
Elta] = Elp(xn) w' + 2n] = E[o(xn)w] + E[nn] - per hip = \$ (Xe) WT

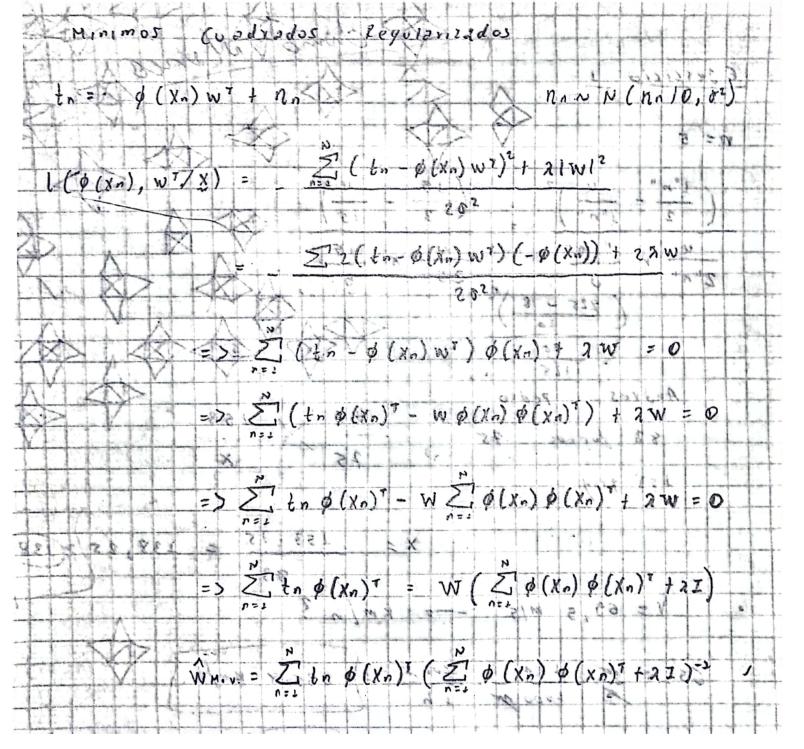
Var (tr) = Var () (Xn) WT + Rn) = Ver (d (xn) w) + Ver (nn) : °2.

Iverso se concrege que to MH (\$ (Xn) WT ; 02)









 $P(\phi(x_0), w^7, x) \propto P(t_0/x, w^7) P(w^7)$ log P(W/ten & (xn)/x) = L(TIN(ten/@(xn)w;x) TN(20/0, 52) $= L \left[\frac{\pi}{n} \frac{1}{\sqrt{2\pi\sigma_n^2}} e^{\left(-\frac{\left(\ln - \sigma \left(\chi_0 W^T \right)^2 \right)}{2\sigma_n^2} \right)} \right] + \lambda \left[\frac{\pi}{n} \right] N \left(n - 10, \sigma_n^2 \right) \right]$ $\frac{1}{1} \left(\frac{1}{11} \underbrace{\frac{1}{12\pi \sigma_n^2}}_{r=1} e^{-\frac{1}{2} \frac{n}{2\pi - 0} \frac{n^2}{n^2}} \right)$ $= \underbrace{\mathcal{Y}} - \underbrace{\frac{\nu}{2}}_{2} \left[Lg(2\pi) + log(\epsilon_{n}^{2}) \right]. - \underbrace{\frac{\nu}{2} ln_{n}l^{2}}_{2k_{n}^{2}}$ = N [log (211) + log (02)] - 11 to - 0(x0) WT 112 - N [log (2n + log (2) - 11 n 112 = $MA - \left[\frac{2\sigma^2}{2\sigma^2} \| t_n - \phi(x_n) w^{\gamma} \|^2 + \frac{2\sigma^2}{2\sigma^2} \| n \|^2 \right] + c f e$ = Min 11 tn - \$ (xn) WT 112 202 11 n 112] + Cte $\lambda = \frac{\partial n^2}{\partial x^2} \hat{W}_{HAR} = \left(\phi(x_n)^T \phi(x_n) + \frac{\partial \lambda I}{N} \right)^{-1} \phi(x_n)^T + n - W_{Har}$