4.3) Show
$$V[\partial] \ge V[\varepsilon]$$

$$V[\varepsilon] = E[\varepsilon'] - E[\varepsilon]^{2}$$

$$V[\partial] = E[\partial^{2}] - F[\partial^{2}]^{2}$$

$$V[\partial] = E[\partial^{2}] - E[\partial]^{2}$$

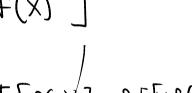
$$V[\partial] = E[\partial^{2}] - E[\partial^{2}]$$

$$V[\partial] \ge V[\mathcal{E}]$$

$$E[Y^2-2Y_3(s) \stackrel{?}{\geq} E[Y^2-2Y_1(x) + f(x)^2]$$

$$\left[\mathcal{E}^{2} \right]$$

$$f(x)_{s}$$



$$-E[2(2)]_{s} + E[2(2)]_{s} - E[4(x)]_{s} + E[t(x)]_{s}$$

$$-E[2(2)]_{s} - 3E[\lambda^{2}(2)]_{s} - E[4(x)]_{s} + E[t(x)]_{s}$$

$$-E[2(2)]_{s} - 3E[\lambda^{2}(2)]_{s} - 5E[4(x)]_{s} + E[t(x)]_{s}$$

$$E[S(s)]^{2}-2E[Y_{S}(s)] \geq E[f(x)]^{2}-2E[Y_{S}(x)]$$

$$E[3(S)]^{2}-2E[Y_{5}(S)] \geq E[f(X)]^{2}-2E[Y_{5}(X)]$$
It is noted here that
$$S(S) = \widetilde{A} + \widetilde{\beta}S = \widetilde{A} + \beta(X+U)$$

$$= \widetilde{A} + \widetilde{\beta}X + \widetilde{\beta}U$$

$$E[Z+BX+BU]^{2} > E[X+BX]^{2}$$
A the second term

$$E[2\gamma + \beta x\gamma + \beta U\gamma] > E[\alpha y + \beta \gamma]$$

Since first term so by c^2 & second term
so by c

the LHS 15 larger than the right hand-side .. V[]] > V[E]