$$\boxed{y = X\beta + e} = \begin{bmatrix} 1\beta_0 + x_{11}\beta_1 + \cdots + x_{1p}\beta_p \\ 1\beta_0 + x_{21}\beta_1 + \cdots + x_{2p}\beta_p \\ \vdots \\ 1\beta_0 + x_{m1}\beta_1 + \cdots + x_{mp}\beta_p \end{bmatrix} + \begin{bmatrix} e_1 \\ e_2 \\ \vdots \\ e_m \end{bmatrix} \begin{matrix} \leftarrow V.A. \\ \leftarrow V.A. \\ \\ \leftarrow V.A. \end{matrix}$$

ASSUME INDEPENDENCE FOR EACH OBSERVATION (ROW)

$$E[y] = E[\cancel{X\beta}]_{X\beta} + E[\cancel{e}]^0 \text{ for all vars} \quad \Rightarrow \quad \boxed{E[y] = X\beta}$$

$$VAR[y] = VAR[\cancel{X\beta}]^0 + VAR[\cancel{e}]_{\sigma^2 I} \quad \Rightarrow \quad \boxed{VAR[y] = \sigma^2 I}$$