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$$y = Xb + Zu + e$$

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= y

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= b

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= u

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= X
 = Z
 = e

$$E(y) = Xb$$

$$V \begin{bmatrix} u \\ e \end{bmatrix} = \begin{bmatrix} A\sigma_a^2 & 0 \\ 0 & I\sigma^2 e \end{bmatrix}$$

x

$$\begin{bmatrix} y_1 \\ y_2 \\ \cdot \\ \cdot \\ \cdot \\ y_6 \end{bmatrix} = \begin{bmatrix} X_1 & 0 & 0 & \dots & 0 \\ 0 & X_2 & \dots & & 0 \\ \cdot & 0 & \dots & & 0 \\ \cdot & & \cdot & \cdot & \\ \cdot & & \cdot & \cdot & \\ 0 & 0 & \dots & X_6 & \end{bmatrix} \begin{bmatrix} b_1 \\ \cdot \\ \cdot \\ \cdot \\ b_6 \end{bmatrix} + \begin{bmatrix} Z_1 & 0 & 0 & \dots & 0 \\ 0 & Z_2 & 0 & \dots & 0 \\ \cdot & & & & 0 \\ \cdot & & & & \\ \cdot & & & & \\ 0 & 0 & & & Z_6 \end{bmatrix} \begin{bmatrix} u_1 \\ u_2 \\ \cdot \\ \cdot \\ u_6 \end{bmatrix} + \begin{bmatrix} e_1 \\ e_2 \\ \cdot \\ \cdot \\ \cdot \\ e_6 \end{bmatrix}$$

(P < /)

(i = ...) i = y_i

i = X_i

i = b_i

i = Z_i

i = u_i

i = e_i

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$$E(y) = Xb$$

$$Var(y) = ZGZ' + R$$

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(P < /)

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