In Matrix - Vector Notation :

Group animals according to breeds. All Angus Animals first, then all Limousin animals, last all Simmental animals

vector $y = \begin{bmatrix} y_{11} \\ y_{21} \\ y_{41} \\ y_{72} \\ y_{82} \\ y_{92} \\ y_{102} \\ y_{83} \\ y_{53} \\ y_{63} \end{bmatrix} = \begin{bmatrix} 471 \\ 463 \\ 470 \\ \\ \\ \\ \\ \\ \\ 491 \end{bmatrix}$

vector : $b = \begin{bmatrix} b_0 \\ b_1 \\ b_2 \\ b_3 \end{bmatrix}$ → Intercept; → effect of Angus on BW; → effect of Limousin on BW; → effect of Simmental on BW

vector $e = \begin{bmatrix} e_{11} \\ e_{21} \\ e_{41} \\ e_{63} \end{bmatrix}$

Matrix $X = \begin{bmatrix} 1 & 1 & 0 & 0 \\ & & & \end{bmatrix}$