Remember : Inbreeding Coefficient F_5 of animal 5
From the diagonal element $(A)_{55}$:

Exam $\quad$ $F_5 = (A)_{55} - 1 = 0.125$

$\quad$! $\quad$ $F_5 \neq 1.125$

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From BLUP: Mixed Model Equations contain A^{-1}

(Remind : Inverse A^{-1} is defined such that
$\quad\quad A \cdot A^{-1} = I$ (identity))

MME : $\begin{bmatrix} X^T R^{-1} X & X^T R^{-1} Z \\ Z^T R^{-1} X & Z^T R^{-1} Z + G^{-1} \end{bmatrix} \begin{bmatrix} \hat{\beta} \\ \hat{u} \end{bmatrix} = \begin{bmatrix} X^T R^{-1} y \\ Z^T R^{-1} y \end{bmatrix}$

$\quad\quad G = A \cdot \sigma_u^2 \Rightarrow G^{-1} = A^{-1} \frac{1}{\sigma_u^2}$

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→ MME are based on an animal model which
corresponds to a Linear Mixed Effects Model
when the breeding values of all animals in
the pedigree are modelled as random effects.