$$\begin{bmatrix} -5 & 2 & 1 \\ 1 & 0 & 3 \\ 3 & 1 & 6 \end{bmatrix} \longrightarrow \begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{bmatrix} \begin{bmatrix} -5 & 2 & 1 \\ 1 & 0 & 3 \\ 3 & 1 & 6 \end{bmatrix} = \begin{bmatrix} -5 & 2 & 1 \\ 3 & 1 & 6 \\ 1 & 0 & 3 \end{bmatrix}$$

P_1 A $P_1 A$

$$\longrightarrow \begin{bmatrix} 1 & 0 & 0 \\ 2/5 & 1 & 0 \\ 1/5 & 0 & 1 \end{bmatrix} \begin{bmatrix} -5 & 2 & 1 \\ 3 & 1 & 6 \\ 1 & 0 & 3 \end{bmatrix} = \begin{bmatrix} -5 & 2 & 1 \\ 0 & 9/5 & 11/5 \\ 0 & 1/5 & 11/5 \end{bmatrix} \longrightarrow \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & -1/11 & 1 \end{bmatrix} \begin{bmatrix} -5 & 2 & 1 \\ 0 & 9/5 & 11/5 \\ 0 & 1/5 & 11/5 \end{bmatrix} = \begin{bmatrix} -5 & 2 & 1 \\ 0 & 9/5 & 11/5 \\ 0 & 0 & 0 \end{bmatrix}$$

M_1 $P_1 A$ M_2 $P_2 M_1 P_1 A$

$$\frac{9}{5} \cdot 2 + 1 = \frac{6}{5} + \frac{5}{5} = \frac{11}{5}$$

$$\frac{1}{5} + 6 = \frac{1}{5} + \frac{30}{5} = \frac{31}{5}$$

$$\frac{1}{5} \cdot 2 = \frac{2}{5}$$

$$\frac{1}{5} + 3 = \frac{1}{5} + \frac{15}{5} = \frac{16}{5}$$

$$-\frac{2}{11} \cdot \frac{11}{5} + \frac{2}{5} = -\frac{2}{5} + \frac{2}{5} = 0 \quad \checkmark$$

$$-\frac{2}{11} \cdot \frac{11}{5} + \frac{16}{5} = \alpha$$

$$L = (M_2 P_2 M_1 P_1)^{-1} =$$

$$M_2 P_2 M_1 P_1 = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & -1/11 & 1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 0 \\ 2/5 & 1 & 0 \\ 1/5 & 0 & 1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & -1/11 & 1 \end{bmatrix} \begin{bmatrix} 1 & 0 & 0 \\ 1/5 & 0 & 1 \\ 2/5 & 1 & 0 \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 \\ 1/5 & 0 & 1 \\ 2/5 & 1 & -1/11 \end{bmatrix}$$

$$M_2 P_2 M_1 P_1$$

$$(M_2 P_2 M_1 P_1)^{-1} \longrightarrow = \begin{bmatrix} 1 & 0 & 0 \\ -\frac{11}{5} & 2 & 1 \\ -1/5 & 1/11 & 0 \end{bmatrix} = L$$

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MINORS IN
CHEMISTRY
& MATHEMATICS