

Calculando matriz inversa 3×3

Seja $A = \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix}$, então queremos A^{-1}

$$A^{-1} = \frac{1}{\det(A)} \cdot \text{adj}(A)$$

↙ adjunta
↘ determinante

$$\text{adj}(A) = \begin{bmatrix} M_{11} & -M_{12} & M_{13} \\ -M_{21} & M_{22} & -M_{23} \\ M_{31} & -M_{32} & M_{33} \end{bmatrix}^T = \begin{bmatrix} M_{11} & -M_{21} & M_{31} \\ -M_{12} & M_{22} & -M_{32} \\ M_{13} & -M_{23} & M_{33} \end{bmatrix}$$

$3 \times 1 = \text{par} \rightarrow \text{ sinal positivo}$
 $3 \times 2 = \text{ímpar} \rightarrow \text{ sinal negativo}$

$$M_{11} = \det \begin{bmatrix} a_{22} & a_{23} \\ a_{32} & a_{33} \end{bmatrix}$$

$$-M_{21} = -\det \begin{bmatrix} a_{12} & a_{13} \\ a_{32} & a_{33} \end{bmatrix}$$

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