

Algebra

$$A = \begin{bmatrix} 1 & 2 \\ 2 & 1 \end{bmatrix}$$

coluna vira linha

$$A^T = \begin{bmatrix} 1 & 2 \\ 2 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 2 & -1 & 3 & 4 \\ 3 & 1 & 2 & -1 & -2 \\ 5 & 5 & 0 & 5 & 6 \\ 6 & 2 & 4 & -2 & 0 \end{bmatrix}$$

$$\begin{aligned} & \leftarrow \\ & L_2 \leftarrow L_2 - 3L_1 \\ & L_3 \leftarrow L_3 - 5L_1 \\ & L_4 \leftarrow L_4 - 6L_1 \end{aligned}$$

$$\begin{bmatrix} 1 & 2 & -1 & 3 & 4 \\ 0 & -5 & -1 & -10 & -14 \\ 0 & 5 & 5 & -10 & -14 \\ 0 & -1 & -10 & -20 & -24 \end{bmatrix}$$

" " "

Matriz inversa:

→ só existe se for matriz \square

→ $AB = BA = I$; B é inversa de A

$$(kA)^{-1} = \frac{1}{k} A^{-1}$$

$$(A^m)^{-1} = (A^{-1})^m$$

$$(A^T)^{-1} = (A^{-1})^T$$

$$\left\{ \begin{aligned} (AB)^{-1} &= B^{-1} A^{-1} \\ (AB)^T &= B^T A^T \\ (A+B)^T &= A^T + B^T \end{aligned} \right.$$

Obter Inversa:

$$A = \begin{bmatrix} 1 & -1 \\ 2 & -1 \end{bmatrix}$$

$$A^{-1} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$