

$$1) \begin{bmatrix} 3 & -2 & 1 \\ -1 & 1 & -2 \\ 4 & 3 & 2 \end{bmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} -12 \\ 10 \\ -1 \end{pmatrix}$$

(3)

$$\begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{bmatrix} 3 & -2 & 1 \\ -1 & 1 & -2 \\ 4 & 3 & 2 \end{bmatrix}^{-1} \begin{pmatrix} -12 \\ 10 \\ -1 \end{pmatrix}$$

Find $\begin{bmatrix} 3 & -2 & 1 \\ -1 & 1 & -2 \\ 4 & 3 & 2 \end{bmatrix}^{-1}$

① Find matrix of cofactors.

$$\begin{bmatrix} 8 & +6 & -7 \\ -7 & 2 & +17 \\ 3 & +5 & 1 \end{bmatrix}$$

② Change signs of odd permuted entries.

$$\begin{bmatrix} 8 & -6 & -7 \\ -7 & 2 & -17 \\ 3 & 5 & 1 \end{bmatrix}$$