

$$A = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 1 & 1 & 0 & 0 & 0 \\ 1 & 2 & 1 & 0 & 0 \\ 1 & 3 & 3 & 1 & 0 \\ 1 & 4 & 6 & 4 & 1 \end{bmatrix}$$

$$\left[ \begin{array}{ccccc|ccccc} 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 1 & 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ 1 & 2 & 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 \\ 1 & 3 & 3 & 1 & 0 & 0 & 0 & 0 & 1 & 0 \\ 1 & 4 & 6 & 4 & 1 & 0 & 0 & 0 & 0 & 1 \end{array} \right] \xrightarrow{\text{سطر اول را از هر ی سطرها  
لغوی کنیم}}$$

$$\left[ \begin{array}{ccccc|ccccc} 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & -1 & 1 & 0 & 0 & 0 \\ 0 & 2 & 1 & 0 & 0 & -1 & 0 & 1 & 0 & 0 \\ 0 & 3 & 3 & 1 & 0 & -1 & 0 & 0 & 1 & 0 \\ 0 & 4 & 6 & 4 & 1 & -1 & 0 & 0 & 0 & 1 \end{array} \right] \xrightarrow{\begin{array}{l} \text{سطر ۳} = \text{سطر ۲} - 2 \times (\text{سطر ۱}) \\ \text{سطر ۴} = \text{سطر ۳} - 3 \times (\text{سطر ۲}) \\ \text{سطر ۵} = \text{سطر ۴} - 4 \times (\text{سطر ۲}) \end{array}}$$

$$\left[ \begin{array}{ccccc|ccccc} 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & -1 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 & -2 & 1 & 0 & 0 \\ 0 & 0 & 3 & 1 & 0 & 2 & -3 & 0 & 1 & 0 \\ 0 & 0 & 4 & 4 & 1 & 3 & -4 & 0 & 0 & 1 \end{array} \right] \xrightarrow{\begin{array}{l} \text{سطر ۴} = \text{سطر ۳} - 3 \times (\text{سطر ۲}) \\ \text{سطر ۵} = \text{سطر ۴} - 4 \times (\text{سطر ۲}) \end{array}}$$

$$\left[ \begin{array}{ccccc|ccccc} 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & -1 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 & -2 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & -1 & 3 & -2 & 1 & 0 \\ 0 & 0 & 0 & 4 & 1 & -3 & 4 & -4 & 0 & 1 \end{array} \right] \xrightarrow{\text{سطر ۵} = \text{سطر ۴} - 4 \times (\text{سطر ۳})}$$

$$\left[ \begin{array}{ccccc|ccccc} 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & -1 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 & -2 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & -1 & 3 & -2 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 & 4 & -4 & 4 & -4 & 1 \end{array} \right] \quad A^{-1} = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ -1 & 1 & 0 & 0 & 0 \\ 1 & -2 & 1 & 0 & 0 \\ -1 & 3 & -2 & 1 & 0 \\ 4 & -4 & 4 & -4 & 1 \end{bmatrix}$$