

$$B = \begin{bmatrix} 0 & 0 & 4 & 0 & 5 \\ 0 & 2 & -1 & 2 & -1 \\ 0 & 3 & 0 & 0 & 2 \\ 0 & 1 & 2 & 3 & 2 \end{bmatrix} \xrightarrow[\text{ردم تا اینجا}]{\text{سطر اول}} \begin{bmatrix} 0 & 2 & -1 & 2 & -1 \\ 0 & 0 & 2 & -4 & 3 \\ 0 & 1 & 2 & 3 & 2 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\xrightarrow{\text{سطر اول} \div 2} \begin{bmatrix} 0 & 1 & -\frac{1}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 2 & -4 & 3 \\ 0 & 1 & 2 & 3 & 2 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\begin{array}{l} \text{سطر دوم} + (-2 \times \text{سطر اول}) \\ \text{سطر سوم} + (-1 \times \text{سطر اول}) \end{array} \rightarrow \begin{bmatrix} 0 & 1 & -\frac{1}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 3 & -6 & 4 \\ 0 & 0 & \frac{5}{2} & 1 & \frac{5}{2} \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\xrightarrow{\text{سطر دوم} \div 3} \begin{bmatrix} 0 & 1 & -\frac{1}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 1 & -2 & \frac{4}{3} \\ 0 & 0 & \frac{5}{2} & 1 & \frac{5}{2} \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\begin{array}{l} \text{سطر دوم} + (-\frac{5}{2} \times \text{سطر دوم}) \\ \text{سطر سوم} + (-\frac{1}{2} \times \text{سطر دوم}) \end{array} \rightarrow \begin{bmatrix} 0 & 1 & -\frac{1}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 1 & -2 & \frac{4}{3} \\ 0 & 0 & 0 & 2 & -\frac{11}{6} \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\xrightarrow{\text{سطر سوم} \div 2} \begin{bmatrix} 0 & 1 & -\frac{1}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 1 & -2 & \frac{4}{3} \\ 0 & 0 & 0 & 1 & -\frac{11}{12} \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\begin{array}{l} \text{سطر دوم} + (-2 \times \text{سطر سوم}) \\ \text{سطر اول} + (-\frac{1}{2} \times \text{سطر سوم}) \end{array} \rightarrow \begin{bmatrix} 0 & 1 & -\frac{1}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 1 & -2 & \frac{4}{3} \\ 0 & 0 & 0 & 1 & -\frac{11}{12} \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\xrightarrow{\text{سطر اول} \div (-\frac{11}{12})} \begin{bmatrix} 0 & 1 & -\frac{1}{2} & 1 & -\frac{1}{2} \\ 0 & 0 & 1 & -2 & \frac{4}{3} \\ 0 & 0 & 0 & 1 & -\frac{11}{12} \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$