$$A := \begin{bmatrix} 71 & 9 & -5 & 21 & -14 \\ 37 & -2 & 22 & -7 & -19 \\ -13 & -17 & 28 & -29 & -25 \\ 13 & 34 & 17 & 18 & 19 \\ -37 & 14 & -46 & 19 & 23 \end{bmatrix} \quad \textbf{(1}$$

$GaussianElimination(A)$

$$\begin{bmatrix} 71 & 9 & -5 & 21 & -14 \\ 0 & -\frac{475}{71} & \frac{1747}{71} & -\frac{1274}{71} & -\frac{831}{71} \\ 0 & 0 & -\frac{2791}{95} & \frac{1522}{95} & -\frac{67}{95} \\ 0 & 0 & 0 & \frac{5693}{2791} & -\frac{534787}{13955} \\ 0 & 0 & 0 & 0 & -\frac{1084072}{5693} \end{bmatrix} \quad \textbf{(2}$$

$M, L, U := LUDecomposition(A)$

$$M, L, U := \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{bmatrix}, \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ \frac{37}{71} & 1 & 0 & 0 & 0 \\ -\frac{13}{71} & \frac{218}{95} & 1 & 0 & 0 \\ \frac{13}{71} & -\frac{2297}{475} & -\frac{65029}{13955} & 1 & 0 \\ -\frac{37}{71} & -\frac{1327}{475} & -\frac{9564}{13955} & -\frac{25692}{5693} & 1 \end{bmatrix}, \begin{bmatrix} 71 & 9 & -5 & 21 & -14 \\ 0 & -\frac{475}{71} & \frac{1747}{71} & -\frac{1274}{71} & -\frac{831}{71} \\ 0 & 0 & -\frac{2791}{95} & \frac{1522}{95} & -\frac{67}{95} \\ 0 & 0 & 0 & \frac{5693}{2791} & -\frac{534787}{13955} \\ 0 & 0 & 0 & 0 & -\frac{1084072}{5693} \end{bmatrix} \quad \textbf{(3}$$

$$B := \begin{bmatrix} 71 & 9 & -5 & 21 & -12 \\ 37 & -2 & 22 & -7 & -19 \\ -13 & -17 & 28 & -29 & -25 \\ 13 & 34 & 17 & 18 & 13 \\ -37 & 14 & -46 & 19 & 23 \end{bmatrix} \quad \textbf{(4}$$

$GaussianElimination(B)$

$$\begin{bmatrix} 71 & 9 & -5 & 21 & -12 \\ 0 & -\frac{475}{71} & \frac{1747}{71} & -\frac{1274}{71} & -\frac{905}{71} \\ 0 & 0 & -\frac{2791}{95} & \frac{1522}{95} & \frac{39}{19} \\ 0 & 0 & 0 & \frac{5693}{2791} & -\frac{514619}{13955} \\ 0 & 0 & 0 & 0 & -\frac{1046824}{5693} \end{bmatrix} \quad \textbf{(5}$$

$M, L, U := LUDecomposition(B)$

$$M, L, U := \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{bmatrix}, \begin{bmatrix} 1 & 0 & 0 & 0 & 0 \\ \frac{37}{71} & 1 & 0 & 0 & 0 \\ -\frac{13}{71} & \frac{218}{95} & 1 & 0 & 0 \\ \frac{13}{71} & -\frac{2297}{475} & -\frac{65029}{13955} & 1 & 0 \\ -\frac{37}{71} & -\frac{1327}{475} & -\frac{9564}{13955} & -\frac{25692}{5693} & 1 \end{bmatrix}, \begin{bmatrix} 71 & 9 & -5 & 21 & -12 \\ 0 & -\frac{475}{71} & \frac{1747}{71} & -\frac{1274}{71} & -\frac{905}{71} \\ 0 & 0 & -\frac{2791}{95} & \frac{1522}{95} & \frac{39}{19} \\ 0 & 0 & 0 & \frac{5693}{2791} & -\frac{514619}{13955} \\ 0 & 0 & 0 & 0 & -\frac{1046824}{5693} \end{bmatrix} \quad \textbf{(6}$$