Elementary matrices:

$$A = \begin{pmatrix} -3 & 2 & -1 \\ 0 & -6 & 7 \\ 3 & -4 & 4 \end{pmatrix}$$

I -
$$\begin{pmatrix} -3 & 2 & -1 \\ 6 & -6 & 7 \\ 3 & -4 & 4 \end{pmatrix} \Big] *2 \quad \Rightarrow \quad \begin{pmatrix} -3 & 2 & -1 \\ 0 & -2 & 5 \\ 3 & 4 & 4 \end{pmatrix}$$

$$= M_1 A \qquad M_1 = \begin{pmatrix} 1 & 0 & 0 \\ 2 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

II -
$$\begin{pmatrix} -3 & 2 & -1 \\ 0 & -2 & 5 \\ 3 & 4 & 4 \end{pmatrix} *\Big]1 \quad \Rightarrow \quad \begin{pmatrix} -3 & 2 & -1 \\ 0 & -2 & 5 \\ 0 & -2 & 3 \end{pmatrix} = M_2 M_1$$

$$M_2 = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 1 & 0 & 1 \end{pmatrix}$$

$$\text{III} - \begin{pmatrix} -3 & 2 & -1 \\ 0 & -2 & 5 \\ 0 & -2 & 3 \end{pmatrix} \Bigg] \times(-1) \Rightarrow \begin{pmatrix} -3 & 2 & -1 \\ 0 & -2 & 5 \\ 0 & 0 & -2 \end{pmatrix} = M_3 M_2 M_1 A$$

$$M_3 = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & -1 & 1 \end{pmatrix}$$