

Reduced Row Echelon Form

$$A = {}^{-4} \begin{pmatrix} 1 & 2 & 3 & 4 \\ \textcircled{4} & 5 & 6 & 7 \\ \textcircled{6} & 7 & 8 & 9 \end{pmatrix} {}^{-6} \rightarrow \begin{pmatrix} 1 & 2 & 3 & 4 \\ 0 & -3 & -6 & -9 \\ 0 & -5 & -10 & -15 \end{pmatrix}$$

$$\rightarrow \begin{pmatrix} 1 & 2 & 3 & 4 \\ 0 & 1 & 2 & 3 \\ 0 & 1 & 2 & 3 \end{pmatrix} \rightarrow {}^{-2} \begin{pmatrix} 1 & \textcircled{2} & 3 & 4 \\ 0 & 1 & 2 & 3 \\ 0 & 0 & 0 & 0 \end{pmatrix}$$

$$\rightarrow \begin{pmatrix} \textcircled{1} & 0 & -1 & -2 \\ 0 & \textcircled{1} & 2 & 3 \\ 0 & 0 & 0 & 0 \end{pmatrix} \leftarrow \underline{\underline{\text{rref}(A)}}$$