

$$\begin{array}{cccccc}
 \rightarrow & 1 & 2 & -4 & -4 & 5 \\
 & 0 & -1 & 10 & 9 & -5 \\
 & 0 & 0 & 8 & 8 & -8 \\
 & 0 & 0 & 0 & 0 & 24
 \end{array}$$

Rem. i) The row echelon form of a matrix is not unique.

Def. Matrices A and B are row equivalent if there is a series of elementary row operations that converts A into B .