

Def. Elementary row operations

1. Interchange two rows
2. Multiply a row by a nonzero constant.
2. Add a multiple of a row to another row

ex.
$$\begin{bmatrix} 1 & 2 & -4 & -4 & 5 \\ 2 & 4 & 0 & 0 & 2 \\ 2 & 3 & 2 & 1 & 5 \end{bmatrix}$$

$$\begin{array}{rrrrr} -1 & 1 & 3 & 6 & 5 \\ \hline 1 & 2 & -4 & -4 & 5 \\ 0 & 0 & 8 & 8 & -8 \\ 2 & 3 & 2 & 1 & 5 \\ -1 & 1 & 3 & 6 & 5 \end{array}$$