

$$\left[ \begin{array}{ccc|c} 1 & -2 & 1 & 2 \\ 2 & -6 & 11 & 35 \\ -3 & 5 & 1 & 8 \end{array} \right] \begin{array}{l} \xleftarrow{-2} \\ \xleftarrow{-2} \end{array} \begin{array}{l} \\ 3 \end{array}$$

$$\left[ \begin{array}{ccc|c} 1 & -2 & 1 & 2 \\ 0 & -2 & 9 & 31 \\ 0 & -1 & 4 & 14 \end{array} \right] \begin{array}{l} \\ \xleftarrow{} \end{array}$$

$$\left[ \begin{array}{ccc|c} 1 & -2 & 1 & 2 \\ 0 & -1 & 4 & 14 \\ 0 & -2 & 9 & 31 \end{array} \right] \begin{array}{l} \\ \xleftarrow{-1} \\ \xleftarrow{-2} \end{array}$$

$$\left[ \begin{array}{ccc|c} 1 & -2 & 1 & 2 \\ 0 & 1 & -4 & -14 \\ 0 & 0 & 1 & 3 \end{array} \right] \begin{array}{l} \xleftarrow{} \\ \xleftarrow{4} \\ \xleftarrow{-1} \end{array}$$

$$\Rightarrow \begin{cases} x = -5 \\ y = -2 \\ z = 3 \end{cases}$$

$$\left[ \begin{array}{ccc|c} 1 & -2 & 0 & -1 \\ 0 & 1 & 0 & -2 \\ 0 & 0 & 1 & 3 \end{array} \right] \xleftarrow{2}$$

$$\left[ \begin{array}{ccc|c} 1 & 0 & 0 & -5 \\ 0 & 1 & 0 & -2 \\ 0 & 0 & 1 & 3 \end{array} \right]$$