

$$\begin{cases} x + 3y + z = 0 \\ 7x + 6y + 5z = 0 \\ 5x + y - 2z = 0 \end{cases} \begin{array}{l} \cdot(-7) \\ \oplus \\ \cdot(-5) \\ \oplus \end{array}$$

$$\begin{cases} x + 3y + z = 0 \\ -15y - 2z = 0 \\ -14y - 7z = 0 \end{cases} \begin{array}{l} \leftarrow \\ \leftarrow \\ \oplus \\ \cdot(-14) \\ \oplus \\ \cdot(15) \end{array}$$

$$\begin{cases} x + 3y + z = 0 \\ -15y - 2z = 0 \\ -77z = 0 \end{cases} \leftarrow$$

$$\begin{cases} x = 0 \\ y = 0 \\ z = 0 \end{cases} \Rightarrow \text{l.u.}$$