

$$\begin{array}{c}
 \textcircled{5} - 5 \cdot \textcircled{1} \\
 \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 1 & -2 & 3 & 1 & 0 & 10 \\ 3 & 0 & -1 & & & 10 \\ 1 & -1 & 1 & -1 & 1 & 3 \\ 5 & 0 & 2 & 0 & -1 & 6 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 1 & -2 & 3 & 1 & 0 & 10 \\ 3 & 0 & -1 & 0 & 2 & 10 \\ 1 & -1 & 1 & -1 & 1 & 3 \\ 0 & 5 & 12 & 0 & -6 & 16 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 1 & -2 & 3 & 1 & 0 & 10 \\ 3 & 0 & -1 & 0 & 2 & 10 \\ 0 & 0 & 3 & -1 & 0 & 5 \\ 0 & 5 & 12 & 0 & -6 & 16 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 3 & 5 & 0 & -1 & 16 \\ 0 & 0 & 3 & -1 & 0 & 5 \\ 0 & 5 & 12 & 0 & -6 & 16 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 20 & 3 & -4 & 52 \\ 0 & 0 & 3 & -1 & 0 & 5 \\ 0 & 0 & 37 & 5 & -11 & 76 \end{array} \right)
 \end{array}$$

$$\begin{array}{c}
 \textcircled{5} \cdot 2 \textcircled{3} \textcircled{1} \textcircled{4} \\
 \textcircled{4} + \textcircled{5} \\
 \textcircled{4} : 3 \\
 \textcircled{3} - 20 \cdot \textcircled{4} \\
 2 \cdot \textcircled{3} + 23 \cdot \textcircled{5}
 \end{array}$$

$$\begin{array}{c}
 \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 20 & 3 & -4 & 52 \\ 0 & 0 & 3 & -1 & 0 & 5 \\ 0 & 0 & 0 & -2 & -3 & -23 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 20 & 3 & -4 & 52 \\ 0 & 0 & 3 & -3 & -3 & -18 \\ 0 & 0 & 0 & -2 & -3 & -23 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 20 & 3 & -4 & 52 \\ 0 & 0 & 1 & -1 & -1 & -6 \\ 0 & 0 & 0 & -2 & -3 & -23 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 0 & 23 & 16 & 192 \\ 0 & 0 & 1 & -1 & -1 & -6 \\ 0 & 0 & 0 & -2 & -3 & -23 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 0 & 0 & -37 & -185 \\ 0 & 0 & 1 & -1 & -1 & -6 \\ 0 & 0 & 0 & -2 & -3 & -23 \end{array} \right) \rightsquigarrow \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 1 & -1 & -1 & -6 \\ 0 & 0 & 0 & -2 & -3 & -23 \\ 0 & 0 & 0 & 0 & -37 & -185 \end{array} \right) =
 \end{array}$$

$$= \left(\begin{array}{ccccc|c} 1 & -1 & -2 & 0 & 1 & -2 \\ 0 & -1 & 5 & 1 & -1 & 12 \\ 0 & 0 & 1 & -1 & -1 & -6 \\ 0 & 0 & 0 & -2 & -3 & -23 \\ 0 & 0 & 0 & 0 & -37 & -185 \end{array} \right)$$

$$\begin{array}{l}
 x - 2 - 23 + 5 = -2 \Rightarrow x = -2 + 3 \quad x = 1 \\
 -y + 5 \cdot 3 + 4 - 5 = 12 \Rightarrow -y = 12 - 14 \quad y = 2 \\
 z - 4 - 5 = -6 \Rightarrow z = 9 - 6 \quad z = 3 \\
 -2w - 3 \cdot 5 = -23 \Rightarrow -2w = -8 \Rightarrow w = 4 \\
 -37q = -185 \Rightarrow q = 5
 \end{array}$$