

$$\begin{array}{l}
 \downarrow \\
 2(3x + y - 2z = 10) \rightarrow 6x + 2y - 4z = 20 \\
 2(6x - 2y + z = -2) \rightarrow 12x - 4y + 2z = -4 \\
 x + 4y + 3z = 7^* \\
 \hline
 5(12x - 3z = 18) \\
 \hline
 60x - 15z = 90 \\
 39x + 15z = 9 \\
 \hline
 99x = 99 \\
 \hline
 x = 1 \\
 \hline
 3(13x + 5z = 3) \leftarrow \\
 13(1) + 5z = 3 \\
 13 + 5z = 3 \\
 5z = -10 \\
 z = -2 \\
 \hline
 3(1) + y - 2(-2) = 10 \\
 3 + y + 4 = 10 \\
 7 + y = 10 \\
 y = 3 \\
 \hline
 (1, 3, -2)
 \end{array}$$

$$\begin{array}{l}
 \downarrow \\
 2x + 4y - z = -23^* \\
 x - 5y - 3z = -1 \\
 (-x + y + 4z = 24) \rightarrow \\
 \hline
 -7(-4y + z = 23) \leftarrow \\
 \hline
 -4(-4) + z = 23 \\
 16 + z = 23 \\
 z = 7 \\
 \hline
 (0, -4, 7)
 \end{array}$$

$$\begin{array}{l}
 2x + 4y - z = -23 \\
 -2x + 2y + 8z = 48 \\
 \hline
 6y + 7z = 25 \\
 28y - 7z = -161 \\
 \hline
 34y = -136 \\
 y = -4 \\
 \hline
 x - 5(-4) - 3(7) = -1 \\
 x + 20 - 21 = -1 \\
 x - 1 = -1 \\
 x = 0
 \end{array}$$