

Pouštava rovnic: řešte

I. $-x + 3y - 2z - 3t = -2$

II. $x - y + 2z + t = 0$

III. $3x + 2y - z - 9t = -12$

IV. $-2x - 2y + z + 7t = 9$

$$\left(\begin{array}{cccc|c} -1 & 3 & -2 & -3 & -2 \\ 1 & -1 & 2 & 1 & 0 \\ 3 & 2 & -1 & -9 & -12 \\ -2 & -2 & 1 & 7 & 9 \end{array} \right) \sim \left(\begin{array}{cccc|c} -1 & 3 & -2 & -3 & -2 \\ 0 & 2 & 0 & -2 & -2 \\ 0 & 11 & -7 & -18 & -18 \\ 0 & -8 & 5 & 13 & 13 \end{array} \right) \sim \left(\begin{array}{cccc|c} -1 & 3 & -2 & -3 & -2 \\ 0 & 1 & 0 & -1 & -1 \\ 0 & 11 & -7 & -18 & -18 \\ 0 & 0 & 5 & 5 & 5 \end{array} \right) \sim$$

$\cdot (-3) = -3, 9, -6, -9 | -6$

$\cdot (-4) = 0, 8, 0, -8 | -8$

$\cdot (-11) = 0, -11, 0, 11 | 11$

$\cdot (-2) = 2, -6, 4, 6 | 4$

$$\sim \left(\begin{array}{cccc|c} -1 & 3 & -2 & -3 & -2 \\ 0 & 1 & 0 & -1 & -1 \\ 0 & 0 & -7 & -7 & -7 \\ 0 & 0 & 1 & 1 & 1 \end{array} \right) \xrightarrow{\left(\begin{array}{c} - \\ + \\ - \end{array} \right)} \left(\begin{array}{cccc|c} -1 & 3 & -2 & -3 & -2 \\ 0 & 1 & 0 & -1 & -1 \\ 0 & 0 & 1 & 1 & 1 \end{array} \right) \begin{array}{l} I. \\ II. \\ III. \end{array}$$

III. $z + t = 1$

$z = 1 - t$

$\vec{v} = (2t - 3; t - 1; 1 - t; t)$

II. $y - t = -1$

$y = t - 1$

I. $-x + 3(t - 1) - 2(1 - t) - 3t = -2$

$-x + 3t - 3 - 2 + 2t - 3t = -2$

$-x - 5 + 2t = -2 \quad /+5 \quad /-2t$

$-x = 3 - 2t$

$x = 2t - 3$