

$$x_1 \begin{pmatrix} 2 \\ -1 \\ 1 \end{pmatrix} + x_2 \begin{pmatrix} -1 \\ 1 \\ 1 \end{pmatrix} + x_3 \begin{pmatrix} -4 \\ 3 \\ 1 \end{pmatrix} = \begin{pmatrix} 3 \\ -1 \\ 3 \end{pmatrix}$$

$$\begin{pmatrix} -2 \\ 1 \\ 1 \end{pmatrix}$$

$$\begin{cases} 2x_1 - x_2 - 4x_3 = 3 \\ -x_1 + x_2 + 3x_3 = -1 \\ x_1 + x_2 + x_3 = 3 \end{cases}$$

-2 + 3
1
1
1458
19 1/2

x_1	x_2	x_3		a		b
2	-1	-4		3		2
-1	1	3		-1		1
1	1	1		3		1

$$\begin{array}{ccc|c} 2 & -1 & 4 & 1 \\ 0 & 1 & 2 & > \end{array}$$

$\times 2$

$$\begin{array}{ccc|c} 1 & 0 & -1 & 2 \\ 0 & 1 & 2 & 1 \\ 0 & 0 & 2 & 0 \end{array}$$

$$x_2 + 2x_3 = 1$$

$$x_2 = -2\lambda + 1$$

$$\begin{pmatrix} x_1 \\ x_2 \\ x_3 \end{pmatrix} = \begin{pmatrix} -2 \\ 1 \\ 0 \end{pmatrix} + \lambda \begin{pmatrix} 1 \\ -2 \\ 1 \end{pmatrix}$$