

Problems 1

Serafi Nebot Ginard

2023

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1 Problem 1

$$\begin{cases} x_2 + 4x_3 = -5 \\ x_1 + 3x_2 + 5x_3 = -2 \\ 3x_1 + 7x_2 + 7x_3 = -6 \end{cases} \quad (1)$$

Permutate eq_1 and eq_2

$$\begin{cases} x_1 + 3x_2 + 5x_3 = -2 \\ x_2 + 4x_3 = -5 \\ 3x_1 + 7x_2 + 7x_3 = -6 \end{cases}$$

$$eq_3 = eq_3 + eq_1 * -3$$

$$x_1 + 7x_2 + 7x_3 + (-3)(x_1 + 3x_2 + 5x_3) = -6 + (-3)(-2)$$

$$x_1 + 7x_2 + 7x_3 - 3x_1 - 9x_2 - 15x_3 = -6 + 6$$

$$-2x_1 - 9x_2 - 8x_3 = 0$$

$$\begin{cases} x_1 + 3x_2 + 5x_3 = -2 \\ x_2 + 4x_3 = -5 \\ -2x_1 - 9x_2 - 8x_3 = 0 \end{cases}$$