(7) Clarification to MUST-READ Example 2

I do not repeat the statement of this Example here because you must still read it. I only provide clarifications to the steps that have caused confusion to some students.

Ex. 2

$x_1 = x_3 + 3x_4$, $x_2 = -2x_3 - x_4$

$$\underline{x} = \begin{pmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \end{pmatrix} = \begin{pmatrix} x_3 + 3x_4 \\ -2x_3 - x_4 \\ x_3 \\ x_4 \end{pmatrix} = \begin{pmatrix} 1 \cdot x_3 + 3 \cdot x_4 \\ -2x_3 - 1 \cdot x_4 \\ 1 \cdot x_3 + 0 \cdot x_4 \\ 0 \cdot x_3 + 1 \cdot x_4 \end{pmatrix}$$

$$= \begin{pmatrix} 1 \\ -2 \\ 1 \\ 0 \end{pmatrix} \cdot x_3 + \begin{pmatrix} 3 \\ -1 \\ 0 \\ 1 \end{pmatrix} \cdot x_4$$

vector form of the solution to a lin. system