Name: _____

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1. Convert to reduced row-echelon form:
$$\left[\begin{array}{cccc|c} 3 & 3 & 4 & 5 & 10 \\ 1 & 1 & -1 & -3 & 1 \\ 0 & 0 & 2 & 4 & 2 \end{array}\right]$$

2. Use your answer to problem 1 to write the general solution to the corresponding inhomogeneous system of equations,

$$\begin{array}{rcrcrcrcr} 3x_1 & + & 3x_2 & + & 4x_3 & + & 5x_4 & = & 10 \\ x_1 & + & x_2 & - & x_3 & - & 3x_4 & = & 1 \\ & & & & 2x_3 & + & 4x_4 & = & 2 \end{array}$$

3. Give one particular solution to this inhomogeneous system of equations.

4. Write the general solution to the corresponding homogeneous system of equations.