

Handwritten HW 6

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6. Follow the method of Examples 1 and 2 to write the solution set of the given homogeneous system in parametric vector form.

$$\begin{aligned}x_1 + 3x_2 - 5x_3 &= 0 \\x_1 + 4x_2 - 8x_3 &= 0 \\-3x_1 - 7x_2 + 9x_3 &= 0\end{aligned}$$

Solution:

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48. Construct a 3×3 nonzero matrix A such that the vector $\begin{bmatrix} 1 \\ -2 \\ 1 \end{bmatrix}$ is a solution of $A\mathbf{x} = \mathbf{0}$.

Solution: