

Section 7.5: Homogeneous Linear Systems with Constant Coefficients

Examples:

Solve the linear system $\mathbf{x}' = \begin{bmatrix} -3 & 0 \\ 0 & -1 \end{bmatrix} \mathbf{x}$

Solve the linear system $\mathbf{x}' = \begin{bmatrix} 3 & -2 \\ 2 & -2 \end{bmatrix} \mathbf{x}$

Visualizing solutions in the x_1 - x_2 plane (**phase plane**):