

Name:

1. Give the general solution to the following system of differential equations.

$$\mathbf{x}' = \begin{pmatrix} -2 & -1 & 0 \\ 0 & -1 & -1 \\ 1 & 1 & 0 \end{pmatrix} \mathbf{x}$$

2. Give the general solution to the following system of differential equations.

$$\mathbf{x}' = \begin{pmatrix} 0 & 1 & 1 \\ -1 & -2 & -1 \\ 0 & 0 & -1 \end{pmatrix} \mathbf{x}$$