

1. Find the general solution to the following.

$$(a) \mathbf{x}' = \begin{bmatrix} 3 & -1 \\ 1 & 1 \end{bmatrix} \mathbf{x}$$

$$(b) [7.6.7] \mathbf{x}' = \begin{bmatrix} 1 & 0 & 0 \\ 2 & 1 & -2 \\ 3 & 2 & 1 \end{bmatrix} \mathbf{x}$$

$$(c) \mathbf{x}' = \begin{bmatrix} -4 & -9 & 3 \\ 0 & -1 & 0 \\ -6 & -18 & 5 \end{bmatrix} \mathbf{x}$$