Name: _____

Section: _____

1. Find the general solution to the differential equation $\mathbf{y}' = A\mathbf{y}$, where

$$A = \begin{bmatrix} 2 & 1 \\ -1 & 2 \end{bmatrix}$$

2. Find the solution of the initial value problem $\mathbf{y}' = A\mathbf{y}$, $\mathbf{y}(0) = (1, -1)^T$, where

$$A = \begin{bmatrix} -1 & 0 \\ -2 & -1 \end{bmatrix}.$$