Name: **ID #:** **Serial #:**

1. Solve the system $Y' = AY$ where $A = \begin{bmatrix} 0 & 3 & 1 \\ 1 & 2 & 1 \\ 1 & 3 & 0 \end{bmatrix}$. ($A$ has eigenvalues $\lambda_1 = -1$ (multiplicity 2) and

$\lambda_2 = 4$.)

2. Solve the system $Y' = AY$ where $A = \begin{bmatrix} 3 & 8 \\ -2 & -5 \end{bmatrix}$