Name: RUID: $\qquad$
Email:
(1) (10 pt) Find the general solution of the system

$$
\mathbf{x}^{\prime}(\mathbf{t})=\left(\begin{array}{cc}
5 & -1 \\
3 & 1
\end{array}\right) \mathbf{x}(\mathbf{t})
$$

(2) (10 pt) Find the general solution of the system

$$
\mathbf{x}^{\prime}(\mathbf{t})=\left(\begin{array}{cc}
-3 & 2 \\
-1 & -1
\end{array}\right) \mathbf{x}(\mathbf{t})
$$

