

(2 points) Solve the system

$$\frac{dx}{dt} = \begin{bmatrix} -2 & 2 \\ -12 & 8 \end{bmatrix} x$$

with the initial value

$$x(0) = \begin{bmatrix} 9 \\ 22 \end{bmatrix}$$

$$x(t) = \begin{bmatrix} \text{ } & \text{ } \\ \text{ } & \text{ } \end{bmatrix}$$