A Kin X k2> Z At t=0, [A] = [A] 0 [A] = [A] = Exit $[X] = [A]_0 \frac{k_1}{k_2 - k_1} \left(\frac{-k_1 t}{e^{-k_2 t}} \right)$ The equation for the variation of [2] can be obtained by nothing that [A] + [X] + [Z] = [A]. So that 00 [2] = [A] - [X] Torsertion of the expressions for [A] and, [X] in the eq. of) [Z] $\begin{aligned} & \begin{bmatrix} z \end{bmatrix} = \begin{bmatrix} A \end{bmatrix}_0 - \begin{bmatrix} A \end{bmatrix}_0 e^{k_1 t} - \begin{bmatrix} A \end{bmatrix}_0 \frac{k_1}{k_2 - k_1} \left(e^{k_1 t} - e^{k_1 t} \right) \\ & = \begin{bmatrix} A \end{bmatrix}_0 \left\{ 1 - e^{k_1 t} - \frac{k_1}{k_2 - k_1} \left(e^{k_1 t} - e^{k_1 t} \right) \right\} \end{aligned}$ $= [A]_{0}^{1} \frac{k_{2}-k_{1}-(k_{2}-k_{1})-k_{1}t_{2}-k_{1}t_{2}-k_{1}t_{2}}{k_{2}-k_{1}}$ $= [A]_{0} \begin{cases} k_{2}-k_{1}-k_{2} = k_{1}t + k_{1}e^{k_{2}t} \\ -k_{1}e^{k_{1}t} + k_{1}e^{k_{2}t} \end{cases}$ $= [A]_{0} \begin{cases} k_{2}-k_{1} \end{cases} \begin{cases} k_{2}(1-e^{k_{1}t}) - k_{1}(1-e^{k_{2}t}) \end{cases}$ $= [A]_{0} \begin{cases} k_{2}-k_{1} \end{cases} \begin{cases} k_{2}(1-e^{k_{1}t}) - k_{1}(1-e^{k_{2}t}) \end{cases}$