$$x' = A(t)x + b(t) \qquad (7)$$

$$x(t_0) = \xi \qquad (8)$$

$$x' = Ax + b$$

$$x(t) - x(t_0) = \int_{t_0}^{t} Ax + b \, dx$$

$$\Delta_k = \varphi_{k+1} - \varphi_k$$

$$\Delta_0 + \Delta_1 + \Delta_2 + \Delta_3 + \dots$$

$$\cancel{\varphi_1} - \cancel{\varphi_0} + \cancel{\varphi_2} - \cancel{\varphi_1} + \cancel{\varphi_3} - \cancel{\varphi_2} + \cancel{\varphi_4} - \cancel{\varphi_3} + \dots$$

$$\sum_{n=0}^{\infty} a_n = \lim_{i\to\infty}\left(\sum_{n=0}^{i} a_n\right)$$

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$$\sum_{n=0}^{\infty} (-1)^n = 1 - 1 + 1 - 1 + 1 \ldots$$

$$\frac{1}{2}$$

$$x' = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix} \cdot x$$

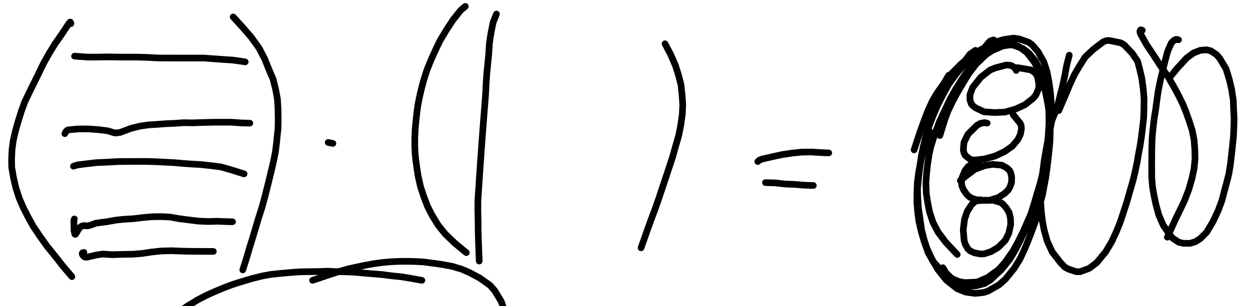
$$\begin{pmatrix} x_1' \\ x_2' \end{pmatrix} = \begin{pmatrix} x_2 \\ -x_1 \end{pmatrix}$$

$$x_1' = x_2$$

$$x_2' = -x_1$$

$$y_1 = \begin{pmatrix} t^2 \\ 3t+1 \\ 2t \end{pmatrix}\Bigg|_{t=1} = \begin{pmatrix} 1 \\ 4 \\ 2 \end{pmatrix}$$

$$Y = \begin{pmatrix} \begin{pmatrix} y_1 \end{pmatrix} & \begin{pmatrix} y_2 \end{pmatrix} & \dots & \begin{pmatrix} y_n \end{pmatrix} \end{pmatrix}$$



$m \times n = n \times m$

$m \times m$

$$y(t_0) = y_0$$

$$\tilde{y} \cdot C = y_0$$

$$\Rightarrow$$

$$\cancel{\tilde{y}^{-1}\tilde{y}} \cdot C = \tilde{y}^{-1} \cdot y_0$$

$$A : \quad A(v) = \lambda(v)$$

$$\begin{vmatrix} 1-\lambda & 2 & 3 \\ 4 & 5-\lambda & 6 \\ 7 & 8 & 9-\lambda \end{vmatrix} = 0$$

$$A - \lambda \cdot I$$

$$\begin{pmatrix} 1-\lambda & 2 & 3 \\ \cdot & - & \cdot \\ \cdot & -- & \cdot \end{pmatrix} \cdot \begin{pmatrix} v_1 \\ v_2 \\ v_3 \end{pmatrix} = 0$$

$$\begin{pmatrix} \lambda & 1 & 0 & 0 \\ & \lambda & 1 & 0 \\ & & \lambda & 1 \\ \text{\Large 0} & & & \lambda \end{pmatrix}$$

$$e^{A+B} = e^{A} \cdot e^{B} \text{ if } \begin{matrix} A \cdot B \\ \shortparallel \\ B \cdot A \end{matrix}$$

$e^{(2+3i)\cdot x}$, $e^{(2-3i)\cdot x}$ 3 raíz

$e^{2x}\cdot \sin 3x$ $\sin$, $\cos x$ $x e^{2x}\cdot \sin 3x$

λ más 3

$$e^{\lambda t} + t \cdot e^{\lambda t} + \cancel{t^2 \cdot e^{\lambda t}}$$

$$\underline{(t^2+t+1) \cdot e^{\lambda t}}$$