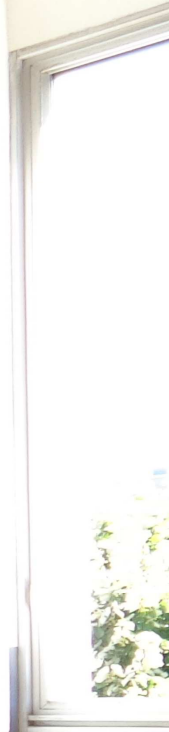




$y = ax + b$
 $\Delta_1 = (y_i - (ax_i + b))$
 $U^{(n)} = \begin{pmatrix} y_0 \\ y_1 \\ \vdots \\ y_n \end{pmatrix}$
 $Y = Ae^{-\lambda t} + C$
 $v^{(n)} = A v^{(n-1)}$
 $\lambda = \frac{1}{2} \pm \frac{\Delta}{2}$
 $(\lambda - \frac{1}{2})^2 = \Delta$
 $\lambda - \frac{1}{2} \pm \Delta = 0$
 $\lambda = \frac{1}{2} \pm \Delta$
 $\sum_{i=1}^n (y_i - (Ae^{-\lambda t_i} + C)) = 0$
 $\frac{\partial}{\partial C} = -2 \sum_{i=1}^n (y_i - Ae^{-\lambda t_i} - C)$
 $\frac{\partial}{\partial A} = -2 \sum_{i=1}^n (y_i - Ae^{-\lambda t_i} - C) \cdot (-t_i e^{-\lambda t_i})$
 $\frac{\partial}{\partial \lambda} = -2 \sum_{i=1}^n (y_i - Ae^{-\lambda t_i} - C) \cdot (-t_i A e^{-\lambda t_i})$
 $\Rightarrow C = \frac{\sum y_i - A \sum e^{-\lambda t_i}}{n}$
 $\sum_{i=1}^n (y_i - Ae^{-\lambda t_i} - C) = 0$
 $S_n(A) - AT_n(\lambda) - C T_n(\lambda) = 0$
 $S_n(A) - AT_n(\lambda) - \frac{S_n(A) - AT_n(\lambda)}{T_n(\lambda)} T_n(\lambda) = 0$
 $\Rightarrow A = \frac{S_n(A) - T_n(\lambda)}{T_n(\lambda) - T_n(\lambda)}$

$\det(A - \lambda I_4)$
 $\lambda = 2$
 $\begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{pmatrix}$
 $\lambda \in \{0, 1\}$
 $\delta \in \{0, 1, 2\}$
 ϵ : points of the plane
 η : Capital mobility
 $A_c \begin{pmatrix} u_1 \\ u_2 \end{pmatrix} = \lambda \begin{pmatrix} u_1 \\ u_2 \end{pmatrix}$
 $\begin{cases} A_1 u_1 = \lambda u_1 \\ A_2 u_2 = \lambda u_2 \end{cases}$
 $\Rightarrow \begin{cases} BA_3 u_2 = \lambda B u_2 = \lambda^2 u_2 \\ A_3 B u_2 = \lambda A_3 u_2 = \lambda^2 u_2 \end{cases}$
 donc en regardant les solutions pour les valeurs de λ on a $\det(A_3 B - \lambda^2 I) = 0$ si $\lambda = 0$

$BA_3 u_2 = u_2$
 $A_3 B u_2 = u_2$
 $u_1 = \begin{pmatrix} u_1 \\ u_2 \end{pmatrix}$
 $u_2 = \begin{pmatrix} u_1 \\ u_2 \end{pmatrix}$







$f(x) = k(x) - k(x)$

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$f(x) = k(x) - k(x)$



$b_n(a, x) = (-1)^{n-1} b_n'(x)$

$b_n(a) = (-1)^n b_n'(a)$

$b_n(a) - b_n(b) = \int_a^b b_n'(x) dx$

$b_n(x) = \frac{1}{n} (x-a)^n$

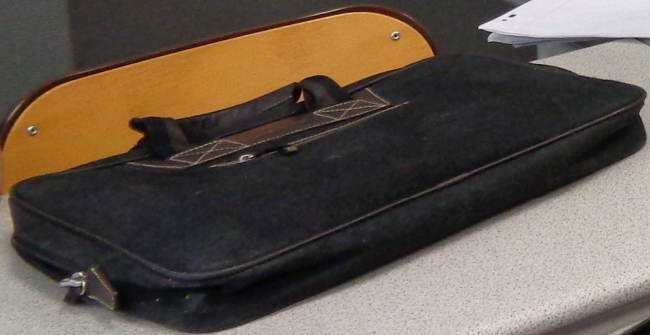
NASA











$\mathbb{R} \rightarrow \mathbb{R}$

$f(x+y) = f(x)f(y)$

si E ensemble, $d: E \times E \rightarrow \mathbb{R}^+$ est une distance si

- ① Symétrie: $d(x,y) = d(y,x)$
- ② Inégalité triangulaire
- ③ $d(x,x) = 0$

